# Champion International

# Frenchtown Mill

## Discharge Permit

## MT-0000035



## Data Report – Volume I

Montana
Department of Health
and
Environmental Sciences

# - DATA REPORT -

# LOWER CLARK FORK RIVER

# WATER QUALITY MONITORING

# 1984 - 1985

## VOLUME I

## CHEMICAL, PHYSICAL AND BIOLOGICAL DATA

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# Dedication

This report is dedicated to the memory of Robert N. Greene, Jr., an eight-year employee of the Montana Water Quality Bureau, who died on September 30, 1985 at the age of 34.

Rob was a true professional who cared. In his work with various sections of the Water Quality Bureau, he consistently went out of his way to investigate new development activities in order to insure compliance with water quality laws. He was a familiar face on the scene at every new mine, cyanide leach facility, train derailment or tank truck spill where surface or ground waters and fisheries were threatened. Rob set an example to others in the regulatory field, as he wholeheartedly pursued his commitment to water quality protection. He was admired by his many friends, acquaintances and contacts for his direct, honest style. Rob will be deeply missed.

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# I. INTRODUCTION

## A. Purpose and Scope

In the fall of 1983, the Water Quality Bureau of the Montana Department of Health and Environmental Sciences (DHES) prepared a Preliminary Environmental Review (PER) on the proposed modification of an existing waste discharge permit for Champion International's Frenchtown Mill. The decision before the agency was whether Champion's existing permit should be revised to allow the direct discharge of treated wastewater to the Clark Fork River throughout the year rather than only during spring runoff.

During the public review process, it became apparent that people were concerned about whether adequate data existed to conduct such an evaluation. The majority of public comments received during that public review process were relative to long term impacts rather than the impact associated with the proposed modification. While most of the comments received could not be supported by scientific documentation, it was obvious that people as far downstream as Idaho were concerned with possible downstream impacts.

Following considerable modification of the PER and a review of all existing technical data, the decision was made to temporarily modify the Champion permit for the period April 1984 to March 1986 to allow a year-round discharge of treated wastewater and to allow increases in annual loading rates for certain wastewater constituents. During the two year life of the temporary permit, the Water Quality Bureau agreed to conduct a detailed study of the lower Clark Fork to provide the additional information needed to address the public concerns which had been expressed. The data gathered during that time would serve as the basis for an Environmental Impact Statement (EIS) to be prepared by the Water Quality Bureau prior to a reissuance of the Champion permit in April 1986.

Since March of 1984, 18 months have been spent studying the lower Clark Fork, its three major tributaries, two major point-source discharges and four impoundments. At the same time, the State of Idaho has been conducting investigations on Lake Pend Oreille, into which the Clark Fork flows after leaving Montana.

The study of the river-lake system will continue, at least through 1986. However, for the purposes of preparing the EIS on the reissuance of Champion's temporary wastewater discharge permit in April 1986, the data used will represent study findings for the period early spring 1984 to early fall 1985.

This report presents the results of the lower Clark Fork study to date. Volume I describes the monitoring activities and

gives tabulated results for the Water Quality Bureau's lower Clark Fork study. Also included are listings of other pertinent data such as streamflow records, self-monitoring data for permitted municipal and industrial discharges to the Clark Fork (City of Missoula, Champion Frenchtown Mill), and river data compiled by the Plains Chapter of the Clark Fork River Watchers. Not included are interpretations of the information by the DHES, those analyses can be found in the department's draft environmental impact statement.

Volume II is a collection of reports presenting the findings of special studies conducted for the Water Quality Bureau by various agencies and individuals. Each of these examined an area of special concern in the lower Clark Fork system and include:

1. Reports by EPA Region X on three <u>algal bioassays</u> of Clark Fork River water which were conducted to determine nutrient limitations in the river and to predict the growth response of river algae under various nutrient loading rates.

2. The results of <u>chronic bioassays</u> of Clark Fork water and Champion wastewater conducted by EPA Region VIII using juvenile rainbow trout and a water flea, <u>Ceriodaphnia</u>. This information will help to predict the effects of the wastewater and other river contaminants on the growth and reproduction of the river's aquatic life.

3. A status report on a <u>major fisheries study</u> being conducted by the Montana Department of Fish, Wildlife and Parks. This study will inventory the kinds and numbers of fish present in the lower Clark Fork system and assess the effects of pollutants on fish numbers, reproduction and general health.

4. A report on the University of Montana's <u>riffle community metabolism study</u> designed to measure the effects of Champion's wastewater discharge on metabolic rates of benthic plants and animals in the river.

5. The findings of an extensive Clark Fork <u>reservoir sediment study</u> by the University of Montana which examined the chemical makeup of bottom sediments, and particularly metals, in the river's impoundments.

Also included is a summary of the findings of Idaho's independent study of the water quality and tropic status of Lake Pend Oreille.

<u>B. Study Objectives</u>

It has already been stated that the WQB's lower Clark Fork study was intended to provide information regarding the long-term effects of Champion wastewater discharge on the health of the river. In order to answer these questions, the study had to be sufficiently broad-based to quantify the overall health of the river throughout its lower length and to allow the examination of other major contaminant sources and their effects on the river. The specific objectives of the monitoring program as outlined in the Lower Clark Fork River Monitoring Plan (Water Quality Bureau, 1984) are as follows:

1. To establish a chemical, physical, and biological water quality baseline for the lower Clark Fork River in Montana.

2. To measure any changes in water quality resulting from modifications in the Champion International Frenchtown Mill wastewater discharge permit (year-round discharge).

3. To determine the contributions, environmental effects and downstream fate of water quality contaminants from various wastewater sources and tributaries along the river.

## II. GENERAL DESCRIPTION OF THE STUDY

The study encompasses about 225 miles of the lower Clark Fork River from Turah (upstream from Milltown Dam) downstream to the Idaho Border, including the Blackfoot, Bitterroot and Flathead rivers. Idaho's water quality study, also described herein, began in the Clark Fork River near the Montana-Idaho Border and continued into Lake Pend Oreille. In Montana, 31 fixed water quality stations were established on the river, its four mainstem reservoirs and three major tributaries (Figure 1). In addition, 11 stations were established in deepwater pools between Frenchtown and Thompson Falls Reservoir. Descriptions of the 42 stations, a river mile index and the site location rationale are given in Table 1.

A variety of chemical, physical and biological water quality variables have been measured in the hundreds of samples collected from both shallow waters and from the bottoms of deepwater pools and reservoirs between March 1984 and August 1985. The actual monitoring approach has been described in detail in the monitoring plan (Water Quality Bureau, 1984). Tables 2 and 3 summarize the monitoring activities, sampling frequency, water quality variables that have been measured and the stations at which each type of monitoring activity was conducted.

Figure 1. Map of Study Area Showing Fixed Water Quality Monitoring Stations

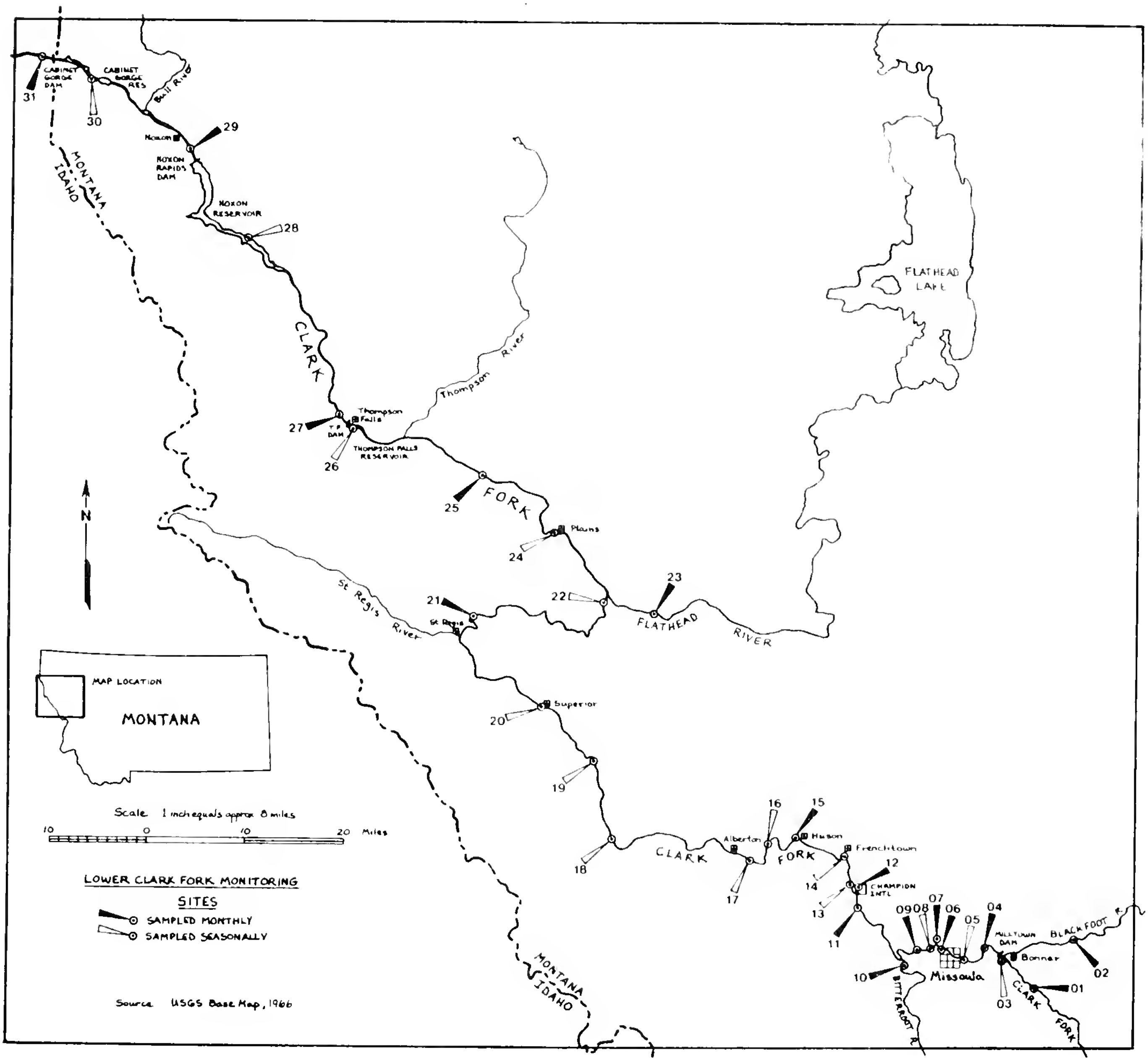

Table 1. Lower Clark Fork River Study Monitoring Station Descriptions.

A. Shallow-water Monitoring Stations

| Station Number | Station Name | Legal Description | River Mile | Average Annual Flow (cfs) | Station Rationale |
|---|---|---|---|---|---|
| 01 | Clark Fork at Turah | T12N R16W Sec. 01 CBC | 0.0 | 1712 | Control station above Milltown Reservoir. Known metals problem from historic mining and smelting activities in headwaters. |
| 02 | Blackfoot River near mouth | T13N R17W Sec. 09 BDD | 6.0 | 1645 | Major tributary to the Clark Fork and a control station above Milltown Reservoir. |
| 03 | Clark Fork in Milltown Reservoir | T13N R18W Sec. 20 DAA | 6.0 | — | Milltown Reservoir is a designated Superfund site and has trapped large quantities of metals originating upstream in the Clark Fork drainage |
| 04 | Clark Fork below Milltown Dam | T13N R18W Sec. 18 CBC | 8.5 | 3051 | Station allows comparison of metals and other pollutants from above to below reservoir. |
| 05 | Clark Fork above Missoula | T13N R19W Sec. 22 DDD | 12.5 | 3051 | Control station above City of Missoula. |
| 06 | Clark Fork above Missoula wastewater treatment plant (WWTP) | T13N R19W Sec. 18 DDA | 15.9 | 3161 (Est.) | Station allows examination of effects of City of Missoula on Clark Fork water quality. |
| 07 | Missoula WWTP discharge to Clark Fork | T13N R19W Sec. 18 DDA | 16.0 | 8.9* | Large volume point source municipal discharge to Clark Fork. |
| 08 | Clark Fork just below Missoula WWTP discharge | T13N R19W Sec. 18 DDD | 16.1 | 3170 (Est.) | Station located in the plume of the WWTP discharge prior to complete mixing. Worst-case situation. |
| 09 | Clark Fork at Shuffield's (Schmidt Construction Co.) | T13N R20W Sec. 24 AAD | 18.0 | 3170 (Est.) | Station allows examination of effects of Missoula WWTP after complete mixing. |
| 10 | Bitterroot River near mouth | T13N R20W Sec. 26 CBD | 21.0 | 2377 (Est.) | Major tributary to the Clark Fork. |
| 11 | Clark Fork at Harper's Bridge | T14N R21W Sec. 35 ADA | 28.5 | 5547 | Control station above Champion Frenchtown Mill. |
| 12 | Champion International Frenchtown Mill wastewater surface discharge | | | | Large volume point source industrial discharge to Clark Fork and the primary focal point of this study. |
| | Discharge 001 | T14N R21W Sec. 23 DBB | 31.0 | 9.2 (Averaged combined flow)* | |
| | Discharge 002 | T14N R21W Sec. 14 BBC | 32.0 | | |

Table 1.A. (cont'd.)

| Station Number | Station Name | Legal Description | River Mile | Average Annual Flow (cfs) | Station Rationale |
|---|---|---|---|---|---|
| 13 | Clark Fork at Marcure (0.5 miles below Champion surface discharge) | T14N R21W Sec. 11 BCB | 32.5 | 5560 (Est.) | Worst-case situation (mixing incomplete) below Champion surface discharge, rapid infiltration basins and storage ponds seepage areas. |
| 14 | Clark Fork near Frenchtown (4 miles below Champion surface discharge) | T14N R21W Sec. 03 BA | 36.0 | 5560 (Est.) | Station located below additional seepage areas. Mixing of surface discharge well underway. |
| 15 | Clark Fork at Huson** | | | 5560 (Est.) | Station where routine Champion self-monitoring and State compliance monitoring is performed. Surface discharge and seepage well-mixed. |
| | Sheffer Ranch | T15N R22W Sec. 36 BBB | 39.0 | | |
| | Sixmile Station | T15N R22W Sec. 26 ACB | 40.5 | | |
| 16 | Clark Fork at Ninemile | T15N R22W Sec. 32 DBB | 46.0 | — | Stations 16-21 allow examination of the effects of the Missoula WWTP and Champion discharges and other pollutants (e.g. metals) with increasing distance from their sources. They also allow the identification of any new significant water quality contaminant sources. |
| 17 | Clark Fork near Alberton | T14N R23W Sec. 12 AAB | 51.0 | — | |
| 18 | Clark Fork at Tarkio | T15N R25W Sec. 34 ADC | 70.0 | — | |
| 19 | Clark Fork at Lozeau | T16N R25W Sec. 29 DBA | 79.0 | — | |
| 20 | Clark Fork at Superior | T17N R26W Sec. 34 ABB | 89.0 | — | |
| 21 | Clark Fork near St. Regis | T18N R27W Sec. 09 CCC | 105.0 | 7580 | |
| 22 | Clark Fork above Flathead River confluence | T19N R25W Sec. 33 DAD | 128.5 | 7580 | Control station for Clark Fork water quality above Flathead River. |
| 23 | Flathead River near mouth | T18N R24W Sec. 05 DCC | 129.0 | 12400 | Major tributary to the the Clark Fork. |
| 24 | Clark Fork at Plains | T20N R26W Sec. 34 ABB | 138.0 | 19930 | Station allows examination of Clark Fork water quality after mixing with Flathead River. |
| 25 | Clark Fork above Thompson Falls Reservoir | T21N R27W Sec. 33 BCB | 153.0 | 19980 | Control station above Thompson Falls Reservoir. |
| 26 | Clark Fork in Thompson Falls Reservoir | T21N R29W Sec. 35 BCC | 169.0 | — | Station allows examination of changes in Clark Fork water quality as it passes through the reservoir. |

Table 1.A. (cont'd)

| Station Number | Station Name | Legal Description | River Mile | Average Annual Flow (cfs) | Station Rationale |
|---|---|---|---|---|---|
| 27 | Clark Fork below Thompson Falls Dam | T22N R30W Sec. 36 BDC | 173.0 | 20702 | Station allows comparison of water quality from above to below the reservoir. It also serves as a control station above Noxon Rapids Reservoir. |
| 28 | Clark Fork in Noxon Rapids Reservoir | T24N R32W Sec. 01 DDD | 198.0 | — | Same rationale as for 26 above. |
| 29 | Clark Fork below Noxon Rapids Dam*** | | | 21220 | Station allows comparison of water quality from above to below reservoir and acts as a control station above Cabinet Gorge Reservoir. |
| | Above Rock Creek | T26N R32W Sec. 32 AAC | 209.0 | | |
| | At Noxon Bridge | T26N R32W Sec. 19 DAB | 210.0 | | |
| 30 | Clark Fork in Cabinet Gorge Reservoir | T27N R34W Sec. 28 DDB | 224.0 | — | Same rationale as for 26 above. |
| 31 | Clark Fork below Cabinet Gorge Dam | T27N R3E Sec. 20 DCC | 232.0 | 22410 | Station allows comparison of water quality from above to below Cabinet Gorge Reservoir. It also indicates quality of Clark Fork as it enters Lake Pend Oreille. Station is monitored by both Montana and Idaho and serves as a check on each state's data quality. |

* Average flow rates for Missoula WWTP and Champion discharges are averages for the period July 1984 - June 1985.

** Shefer Ranch station sampled during seasonal comprehensive monitoring runs. Routine water chemistry monitoring conducted at Sixmile Station because of easier access.

*** Station above Rock Creek sampled through 1984. Station relocated downstream to Noxon Bridge in 1985 to provide baseline data for proposed developments in the Rock Creek drainage.

Table 1. (cont'd)

B. Deep-water Monitoring Stations

| Station Number | Station Name | Legal Description | River Mile | Average Annual Flow (cfs) | Station Rationale |
|---|---|---|---|---|---|
| 03 | Clark Fork arm of Milltown Reservoir | T13N R18W Sec. 21 CA | 6.0 | — | High concentrations of metals in bottom sediments. |
| 13 | Clark Fork - Marcure Pool | T14N R21W Sec. 3 DB | 32.5 | — | Stations 13-22 are located between the Champion Frenchtown Mill and the Flathead River confluence. These stations were established to examine whether there is appreciable settling of organic solids from the Missoula WWTP and Champion discharges in deep river pools and whether such deposition affects Clark Fork water quality. A second objective was to investigate the fate of metal-bearing sediments originating upstream and their subsequent effects. |
| 15 | Clark Fork - Huson Pool | T15N R22W Sec. 26 DC | 40.0 | — | |
| 16 | Clark Fork - Ninemile Pool | T15N R22W Sec. 32 ACC | 46.0 | — | |
| 17 | Clark Fork - Fish Creek Pool | T14N R25W Sec. 1 C | 69.5 | — | |
| 18 | Clark Fork - Tarkio Pool | T15N R25W Sec. 27 B | 71.0 | — | |
| 19.5 | Clark Fork - Superior Pool | T16N R25W Sec. 13 CD | 85.0 | — | |
| 20 | Clark Fork - LaVista Pool | T17N R27W Sec. 19 D | 91.5 | — | |
| 20.5 | Clark Fork - Red Hill Pool | T17N R27W Sec. 5 BB | 100.0 | — | |
| 21 | Clark Fork - Boxcar Pool | T18N R27W Sec. 20 AC | 105.0 | — | |
| 21.5 | Clark Fork - Toole Pool | T18N R27W Sec. 10 DC | 107.0 | — | |
| 22 | Clark Fork - Flathead Pool | T18N R25W Sec. 9 AA | 123.0 | — | |
| 26 | Thompson Falls Reservoir | | | — | Deep water reservoir stations were selected to examine fate and effects of metals and organic solids originating upstream and which may have deposited in the reservoirs. A second objective was to examine oxygen depletion due to reservoir stratification. |
| | Near boat dock | T21N R29W Sec. 8 DB | 169.0 | | |
| | Below sawmill | T21N R29W Sec. 9 CBC | 169.0 | | |
| 28 | Noxon Rapids Reservoir | | | — | |
| | Near Trout Creek | T24N R31W Sec. 16 BC | 198.0 | | |
| | North Shore Campground | T24N R32W Sec. 12 AAD | 200.0 | | |
| 30 | Cabinet Gorge Reservoir | | | — | |
| | Near Bull River | T26N R33W Sec. 9 DA | 225.0 | | |
| | Near Heron | T27N R34W Sec. 26 DC | 230.0 | | |

Table 2. Monitoring Activities, Frequency and Water Quality Variables

A. Chemical and Physical Water Quality Monitoring

1. Shallow-water Monitoring: Monthly during low streamflow and bi-weekly during spring runoff

   Streamflow
   Field temperature
   Metals (total recoverable and/or acid soluble iron, copper, zinc, cadmium, arsenic and manganese)
   Nutrients (nitrate + nitrite, ammonia and Kjedahl nitrogen, ortho-phosphorus and total phosphorus)
   Total suspended solids
   Volatile suspended solids
   Hardness

2. Shallow-water Monitoring: Seasonally (spring, summer, fall)

   Streamflow
   Field temperature
   Field pH
   Field dissolved oxygen
   Biochemical oxygen demand
   Chemical oxygen demand
   Color (natural pH and pH adjusted)
   Metals (total recoverable copper, zinc, cadmium, arsenic and manganese)
   Nutrients (nitrate + nitrite, ammonia and Kjeldahl nitrogen, ortho-phosphorus and total phosphorus)
   Total suspended solids
   Volatile suspended solids
   Lab pH
   Specific conductance
   Hardness

3. Deep-water Monitoring: Seasonally (spring, summer,fall)

   Top water and bottom water samples for:

   Field temperature
   Field pH
   Field dissolved oxygen
   Metals (total recoverable or acid-soluble and dissolved iron, copper, zinc, cadmium, arsenic, manganese, lead, chromium and silver)

Table 2. (cont'd) Monitoring Activities, Frequency and Water Quality Variables

Lab pH
Specific conductance
Hardness

4. Bottom Sediment: Seasonally (spring, summer, fall)

Field hydrogen sulfide (qualitative)
Percent organic content
Metals (total recoverable and total iron, copper, zinc, cadmium, arsenic, manganese, lead, chromium and silver)

5. Surface Diurnal Dissolved Oxygen: Once annually in summer -- every 3 hours for 24 hours

Field temperature
Field dissolved oxygen

6. Organic Analysis: Four times in 1984-1985

Analysis for organic priority pollutants
Scan analysis for other organic constituents

B. Biological Water Quality Monitoring

1. Shallow-water Monitoring: Seasonally (spring, summer, fall)

Macroinvertebrate traveling kicknet samples
Composite periphyton collections
Periphyton chlorophyll/biomass grab samples
Periphyton chlorophyll/biomass accrual on artificial substrates (summer 1984 only)

2. Deep-water Monitoring: Seasonally (spring, summer, fall)

Macroinvertebrate dredge (grab) samples

3. Open-water Monitoring: Seasonally (spring, summer, fall)

Phytoplankton tow samples
Phytoplankton chlorophyll samples
Secchi Disc transparency

Table 2. (cont'd) Monitoring Activities, Frequency and Water Quality Variables

C. Aesthetics Monitoring (included in Volume II)

1. Aesthetics Reconnaisance: Continuously throughout study

2. Foaming, Tendency and Stability: Once in 1984

3. Quantitative Surfactant Testing: Once in 1985

4. River and Wastewater Foam Analysis: Once in 1985

   Analysis for organic priority pollutants
   Scan analysis for other organic constituents
   Microscopic analysis of constituent solids

5. Fish Flesh Taste Tests: Once each in 1985

   Taste and odor analysis of hatchery trout exposed to various dilutions of Champion wastewater

   Taste and odor analysis of resident Clark Fork River trout

6. Champion Wastewater Microscopic Analysis: Monthly or bi-weekly from October 1984 to July 1985

   Identification of constituent organic solids

Table 3. Stations at Which Each Monitoring Activity was Performed

| Station | Chemical/Physical Monitoring | | | | | | Biological Monitoring | | | | | Aesthetics Monitoring | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shallow-water Monitoring -Monthly or biweekly | Shallow-water Monitoring -Seasonally | Deep-water Monitoring | Bottom Sediments | Diurnal Dissolved Oxygen | Organic Analysis | Shallow-water Monitoring | Deep-water Monitoring | Open-water Monitoring | Periphyton Artificial Substrates | Wastewater Microscopic Analysis | River Foam Analysis | Fish Flesh Taste Tests |
| 01 Clark Fork at Turah | X | X | | | X | | X | | | X | | | |
| 02 Blackfoot River | X | X | | | | | X | | | | | | |
| 03 Milltown Reservoir | | X | X | X | | | | X | X | | | | |
| 04 Clark Fork blw. Milltown Dam | X | X | | | | | X | | | | | | |
| 05 Clark Fork abv. Missoula | | X | | | | | X | | | | | | |
| 06 Clark Fork abv. Missoula WWTP | X | X | | | X | | X | | | X | | X | |
| 07 Missoula WWTP | X | X | | | | | | | | | | | |
| 08 Clark Fork blw. Missoula WWTP | | X | | | | | X | | | X | | | |
| 09 Clark Fork at Shuffields | X | X | | | X | | X | | | X | | | |
| 10 Bitterroot River | X | X | | | | | X | | | | | X | |
| 11 Clark Fork at Harper Bridge | X | X | | | X | X | X | | | X | | | X |
| 12 Champion discharge(s) | X | X | | | | X | | | | | X | X | X |
| 13 Clark Fork at Marcure | | X | | | | | X | | | X | | | X |
| 14 Clark Fork nr. Frenchtown | | X | | | | | X | | | | | | X |
| 15 Clark Fork at Huson | X | X | | | X | | X | | | X | | | |
| 16 Clark Fork at Ninemile | | X | | | X | | | | | | | X | |
| 17 Clark Fork nr. Alberton | | X | | | X | | | | | | | | |
| 18 Clark Fork at Tarkio | | X | | | | | | | | | | | |
| 19 Clark Fork at Lozeau | | X | | | X | | X | | | | | | |
| 20 Clark Fork at Superior | | X | | | X | | | | | X | | | |
| 21 Clark Fork nr. St. Regis | X | X | | | X | | X | | | | | X | |
| 22 Clark Fork abv. Flathead | | X | | | X | | | | | | | | |
| 23 Flathead River | X | X | | | X | | X | | | | | | |
| 24 Clark Fork at Plains | | X | | | X | | X | | | X | | | |
| 25 Clark Fork abv. T. Falls Res. | X | X | | | | | X | | | | | | |
| 26 T. Falls Reservoir | | X | X | X | | | | X | X | | | | |
| 27 Clark Fork blw. T. Falls Dam | X | X | | | | | X | | | | | | |
| 28 Noxon Rapids Reservoir | | X | X | X | | | | X | X | | | | |
| 29 Clark Fork blw. Noxon Dam | X | X | | | | | X | | | | | | |
| 30 Cabinet Gorge Reservoir | | X | X | X | | | | X | X | | | | |
| 31 Clark Fk. blw. Cab. Gorge Dam | X | X | | | | | X | | | | | | |
| 13 Marcure Pool | | | X | X | | | | X | | | | | |
| 15 Huson Pool | | | X | X | | | | X | | | | | |
| 16 Ninemile Pool | | | X | X | | | | X | | | | | |
| 17 Fish Creek Pool | | | X | X | | | | X | | | | | |
| 18 Tarkio Pool | | | X | X | | | | X | | | | | |
| 19.5 Superior Pool | | | X | X | | | | X | | | | | |
| 20 LaVista Pool | | | X | X | | | | X | | | | | |
| 20.5 Red Hill Pool | | | X | X | | | | X | | | | | |
| 21 Boxcar Pool | | | X | X | | | | X | | | | | |
| 21.5 Toole Pool | | | X | X | | | | X | | | | | |
| 22 Flathead Pool | | | X | X | | | | X | | | | | |

## III. MONITORING ACTIVITIES AND RESULTS

Rationale, sample collection and analysis methods, stations sampled, sampling frequency and tabulated results for each grouping of water quality variables are presented in the following pages. Quality assurance measures taken to assure data precision, accuracy, representativeness and completeness are described in the Quality Assurance Project Plan: Lower Clark Fork River Monitoring (Water Quality Bureau, 1984). Quality assurance limits (precision, accuracy and detection limits) for chemical/ physical analyses performed by the Chemistry Laboratory Bureau of the Montana Department of Health and Environmental Sciences are given in Appendix B of this report. Quality assurance limits for heavy metals analyses performed by Energy Labs, Inc. of Billings are also included in Appendix B. Quality assurance data pertaining to the organic analyses performed by the EPA Region VIII laboratory are included with the analysis results in Table 7.

### A. Chemical and Physical Water Quality Monitoring

#### 1. Shallow-water Monitoring: River, Effluent and Reservoir Stations.

##### a. Rationale

Water samples for chemical and physical analysis were collected on a regular basis at 29 river and reservoir stations and from the two primary wastewater discharges (City of Missoula and Champion). These samples allowed the bureau to quantify the contributions of water quality contaminants from various waste sources and the major tributaries. They also helped to establish nutrient and suspended solids budgets for the river and assess the instream consequences of cumulative contaminant loading. Sampling during high streamflows helped estimate the amount of deposition of organic and inorganic solids in the mainstem reservoirs when retention time was shortest and Champion International was discharging directly to the river.

##### b. Methods

The 29 river and reservoir stations and two primary wastewater discharges were sampled for a variety of chemical and physical parameters between March 1984 and August 1985. Unfiltered surface grab samples for heavy metals and algal nutrients, and depth-integrated samples for total and volatile suspended solids were collected monthly during low stream flows and at least twice monthly during high flows at 16 of the 31 stations. Three times annually (spring, summer, fall), synoptic water quality monitoring (using estimates of river travel time to follow the same "slug" of water downstream) was conducted at all 31 stations. During the synoptic monitoring runs, a more extensive list of water quality variables were analyzed. Several

times during the course of the study, samples of Champion wastewater and a river control station (Harper Bridge) were collected for analysis of a lengthy list of organic compounds called priority pollutants. The samples were also "screened" for the presence of all other organic constituents not on the priority pollutant list.

Sample collection and analysis methods for each chemical/physical water quality variable and the analyzing laboratory are summarized in Table 4. Sample preservation and handling methods and the scheme for determining streamflows at each station are described in Appendix C.

c. Results

Individual chemical and physical analysis data are presented in tabular form by sampling date in Table 5. A statistical summary of the data giving ranges and means is given in Table 6. Results of Champion wastewater and river water organic analyses are tabulated in Table 7. The reviewer is referred to Appendix D of this report for a summary of field observations recorded at the time of sample collection which may have affected analysis results.

Table 4. Sample Collection and Analysis Methods for Chemical/Physical Shallow-water Monitoring

| Variable | Collection Method | Analytical Method | Laboratory |
|---|---|---|---|
| Water Temperature (°C) (T(C)) | --- | Instream field determination | Field personnel |
| Suspended Solids (mg/l) | Effluents grab sampled. Streams depth-integrated from shore to limit of wadeability. EWI method. USGS p. 3-26 3). | | MDHES Chem Lab |
| Total Suspended Solids (TSS) | | EPA 160.2 2) | |
| Volatile Suspended Solids (VOL TSS) | | EPA 160.4 2) | |
| Nutrients (mg/l) | | | MDHES Chem Lab |
| Nitrate + Nitrite ($NO_3$ + $NO_2$ as N) | | EPA 353.2 2) | |
| Ammonia Nitrogen ($NH_3$ as N) | | EPA 350.1 2) | |
| Kjeldahl Nitrogen (KJLD N) | | EPA 351.2 2) | |
| Ortho Phosphorus (ORTHO P) | | EPA 365.1 2) | |
| Total Phosphorus (TOTAL P) | | EPA 365.1 2) | |
| Hardness (mg/l) as $CaCO_3$) (HARD) | Grab Sample | EPA 200.7 2) | MDHES Chem Lab |
| Total Recoverable Metals (mg/l) | Grab Sample | | MDHES Chem Lab |
| Iron (FE T.R.) | | EPA 200.7 2) | |
| Copper (CU T.R.) | | EPA 200.7 2) | |
| Zinc (ZN T.R.) | | EPA 200.7 2) | |
| Manganese (MN T.R.) | | EPA 200.7 2) | |
| Cadmium (CD T.R.) | | EPA 200.7 2) | |
| Arsenic (AS T.R.) | | EPA 200.7 2) (automated) | |
| pH, Field and Lab (standard pH units) (PH FLD, PH LAB) | Grab Sample | EPA 351.2 2) | Field personnel and MDHES Chem Lab |
| Specific Conductance (µmhos/cm @ 25°C) (SPEC COND) | Grab Sample | EPA 120.1 2) | MDHES Chem Lab |
| Dissolved Oxygen (mg/l) (D.O.) | Grab Sample | EPA 360.2 2) | Field personnel |
| Biochemical Oxygen Demand (mg/l) ($BOD_5$) | Grab Sample | EPA 405.1 2) | MDHES Chem Lab |
| Chemical Oxygen Demand (mg/l) (COD) | Grab Sample | EPA 410. 2) | MDHES Chem Lab |
| Color (standard color units) (COLOR NAT, COLOR PH AD) | Grab Sample | EPA 110.1 2) | MDHES Chem Lab |
| Sulfate (mg/l) ($SO_4$) | Grab Sample | EPA 375.2 2) | MDHES Chem Lab |

Table 4. (cont'd.)

| Variable | Collection Method | Analytical Method | Laboratory |
|---|---|---|---|
| Acid Soluble Metals (mg/l) | Grab Sample | | Energy Labs, Inc. |
| Copper (CU A.S.) | followed by lab | EPA 220.2 [2] | |
| Zinc (ZN A.S.) | filtration (0.45 $\mu$) | EPA 289.2 [2] | |
| Cadmium (CD A.S.) | after 48 hours. | EPA 213.2 [2] | |
| Lead (PB A.S.) | | EPA 2[illegible]2 [2] | |
| GC/MS Priority Pollutant and Scan Analysis (ug/l) | Grab Sample | EPA 608 [1]<br>EPA 624 [1]<br>EPA 625 [1]<br>EPA 1624 [1]<br>EPA 1625 [1] | EPA Region VIII Chem Lab |

## References


1) Federal Register, Vol. 49, No. 209, Appendix A, October 26, 1984.

2) "Methods for Chemical Analysis of Water and Wastes," EPA-600/4-79-020 U.S. Environmental Protection Agency, 1983 (Revised).

3) "National Handbook of Recommended Methods for Water-data Acquisition," U.S. Geological Survey, June, 1978.

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON MARCH 5-9, 1984

| | STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 05 | 1000 | 851. | 1.5 | 8.2 | 1.6 | 0.06 | <0.01 | 0.2 | 0.016 | 0.02 | 190 | 0.12 | <0.01 | 0.03 | 0.03 | <0.005 | 0.007 |
| 02 | BLACKFOOT | 05 | 1100 | 552. | 1.0 | 3.7 | .9 | <0.01 | <0.01 | 0.2 | 0.004 | <0.01 | 134 | 0.08 | <0.01 | 0.008 | 0.005 | <0.005 | 0.001 |
| 03 | IN MILLTWN | 05 | 1230 | | 2.0 | 3.8 | .9 | 0.06 | <0.01 | 0.1 | 0.014 | 0.02 | 185 | 0.11 | 0.01 | 0.02 | 0.04 | <0.005 | 0.006 |
| 04 | BEL MILLTN | 06 | 0700 | 1420. | 1.5 | 4.3 | .8 | 0.03 | <0.01 | 0.1 | 0.009 | 0.01 | 168 | 0.09 | <0.01 | 0.02 | 0.02 | <0.005 | 0.004 |
| 05 | ABV MSLA | 06 | 0830 | 1420. | 1.5 | 5.2 | 1.1 | 0.02 | <0.01 | 0.1 | 0.005 | <0.01 | 167 | 0.09 | 0.01 | 0.02 | 0.02 | <0.005 | 0.004 |
| 06 | ABV STP | 06 | 1000 | 1420. | 2.0 | 4.0 | 1.0 | 0.02 | 0.02 | 0.1 | 0.001 | 0.01 | 165 | 0.08 | 0.01 | 0.02 | 0.02 | <0.005 | 0.004 |
| 07 | STP EFFLNT | 06 | 0930 | 9.92 | 12.0 | 7.0 | 6.0 | 0.01 | 19.3 | 33. | 4.60 | 5.49 | 162 | 0.03 | <0.01 | 0.06 | 0.01 | <0.005 | 0.002 |
| 08 | BEL STP | 06 | 1030 | 1430. | 4.0 | 4.8 | 1.4 | 0.02 | 4.20 | 5.0 | 0.79 | 0.78 | 158 | 0.07 | <0.01 | 0.03 | 0.02 | 0.005 | 0.004 |
| 09 | SHUFFIELDS | 06 | 1115 | 1430. | 2.0 | 3.9 | .9 | <0.01 | 0.11 | 0.2 | 0.040 | 0.05 | 158 | 0.07 | <0.01 | 0.02 | 0.02 | <0.005 | 0.004 |
| 10 | BITTERROOT | 05 | 1545 | 1040. | 3.0 | 4.2 | 1.0 | 0.09 | <0.01 | 0.1 | 0.008 | <0.01 | 65 | 0.10 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |
| 11 | HARPER BR | 06 | 1745 | 2470. | 4.5 | 6.0 | 1.2 | 0.07 | 0.01 | 0.3 | 0.017 | 0.03 | 123 | 0.07 | <0.01 | 0.01 | 0.02 | <0.005 | 0.003 |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 06 | 1430 | 0.0 | 4.0 | 167.5 | 146.7 | <0.01 | 3.1 | 18. | 0.86 | 2.28 | 128 | 0.38 | <0.01 | 0.05 | 0.69 | 0.006 | 0.002 |
| 13 | MARCURE | 06 | 2000 | 2470. | 4.0 | 6.2 | 1.2 | 0.06 | 0.02 | 0.3 | 0.024 | 0.04 | 127 | 0.12 | <0.01 | 0.01 | 0.11 | 0.006 | 0.004 |
| 14 | FRENCHTOWN | 07 | 1430 | | | | | | | | | | | | | | | | |
| 15 | HUSON | 07 | 0015 | 2470. | 4.0 | 7.6 | 1.4 | 0.07 | <0.01 | 0.4 | 0.017 | 0.03 | 126 | 0.12 | <0.01 | 0.02 | 0.05 | 0.005 | 0.003 |
| 16 | 9-MILE | 07 | 0300 | | 3.0 | 8.5 | 1.6 | 0.06 | <0.01 | 0.4 | 0.014 | 0.05 | 125 | 0.11 | <0.01 | 0.01 | 0.05 | 0.005 | 0.003 |
| 17 | ABV ALBERT | 07 | 0500 | | 3.0 | 9.6 | 1.8 | 0.05 | <0.01 | 0.4 | 0.014 | 0.03 | 124 | 0.13 | <0.01 | 0.01 | 0.05 | 0.005 | 0.003 |
| 18 | TARRIO | 07 | 1130 | | 4.0 | 9.1 | 1.8 | 0.05 | <0.01 | 0.3 | 0.018 | 0.03 | 123 | 0.09 | <0.01 | 0.01 | 0.03 | 0.006 | 0.002 |
| 19 | LOZEAU | 07 | 1600 | | 5.0 | 10. | 1.9 | 0.05 | <0.01 | 0.6 | 0.016 | 0.03 | 123 | 0.12 | <0.01 | 0.02 | 0.06 | 0.006 | 0.003 |
| 20 | SUPERIOR | 07 | 1800 | | 5.0 | 5.5 | 1.4 | 0.03 | <0.01 | 0.3 | 0.010 | 0.02 | 120 | 0.07 | <0.01 | 0.007 | 0.02 | 0.006 | 0.002 |
| 21 | BEL ST REG | 08 | 0900 | 3220. | 3.0 | 5.7 | 1.2 | 0.02 | 0.01 | 0.3 | 0.005 | 0.02 | 123 | 0.08 | <0.01 | 0.03 | 0.03 | 0.008 | 0.003 |
| 22 | ABV FLATHD | 08 | 1045 | 3220. | 4.0 | 4.7 | 1.1 | <0.01 | <0.01 | 0.3 | 0.002 | 0.02 | 115 | 0.05 | <0.01 | 0.009 | 0.02 | 0.007 | 0.003 |
| 23 | FLATHEAD R | 08 | 1145 | 11080. | 3.0 | 2.2 | .5 | 0.02 | <0.01 | 0.2 | <0.001 | <0.01 | 88 | 0.02 | <0.01 | <0.005 | 0.005 | 0.005 | <0.001 |
| 24 | PLAINS | 08 | 1300 | 14300. | 3.5 | 3.9 | .9 | 0.01 | <0.01 | 0.2 | <0.001 | <0.01 | 93 | 0.03 | <0.01 | <0.005 | 0.008 | 0.006 | <0.001 |
| 25 | ABV T FALL | 08 | 1530 | 14300. | 4.5 | 1.9 | .5 | <0.01 | <0.01 | 0.3 | <0.001 | <0.01 | 93 | 0.03 | <0.01 | <0.005 | 0.009 | <0.005 | <0.001 |
| 26 | IN T FALLS | 08 | 1630 | | 4.0 | 1.8 | .5 | <0.01 | <0.01 | 0.1 | <0.001 | <0.01 | 94 | 0.02 | <0.01 | <0.005 | 0.01 | 0.008 | 0.001 |
| 27 | BEL T FALL | 09 | 0845 | 15317. | 4.0 | 3.8 | .6 | <0.01 | <0.01 | 0.3 | <0.001 | <0.01 | 94 | 0.04 | <0.01 | 0.012 | 0.02 | 0.006 | <0.001 |
| 28 | IN NOXON | 09 | 1130 | | 4.0 | 2.2 | .5 | 0.02 | 0.01 | 0.1 | 0.002 | <0.01 | 93 | 0.04 | <0.01 | <0.005 | 0.02 | <0.005 | 0.001 |
| 29 | BEL NOXON | 09 | 1215 | 10300. | 6.0 | .6 | .3 | 0.08 | <0.01 | 0.1 | <0.001 | <0.01 | 93 | 0.02 | <0.01 | <0.005 | 0.007 | <0.005 | <0.001 |
| 30 | IN CAB GOR | 09 | 1330 | | 3.0 | 1.7 | .5 | 0.03 | <0.01 | 0.1 | <0.001 | <0.01 | 90 | 0.03 | <0.01 | <0.005 | 0.01 | <0.005 | 0.001 |
| 31 | BEL CAB GO | | | | | | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. WHEN CHAMPION WAS NOT DIRECT DISCHARGING AS INDICATED BY 0.0 FLOW, SAMPLES WERE COLLECTED FROM STORAGE PONDS.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON MARCH 5-9, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 05 | 1000 | 8.30 | 8.37 | 410 | 12.5 | <2.0 | 12.1 | 6.1 | 6.1 | | | | | |
| 02 BLACKFOOT | 05 | 1100 | 8.25 | 8.41 | 265 | 13.0 | <2.0 | 12.5 | 9.0 | 8.9 | | | | | |
| 03 IN MILLTWN | 05 | 1230 | 8.02 | 8.17 | 397 | 11.6 | <2.0 | 13.2 | 7.0 | 6.8 | | | | | |
| 04 BEL MILLTN | 06 | 0700 | 8.25 | 8.44 | 351 | 12.1 | <2.0 | 9. | 6.8 | 6.1 | | | | | |
| 05 ABV MSLA | 06 | 0830 | 8.30 | 8.45 | 349 | 12.2 | 2.5 | <5. | 6.9 | 6.7 | | | | | |
| 06 ABV STP | 06 | 1000 | 8.38 | 8.52 | 342 | 12.9 | <2.0 | <5. | 7.6 | 6.6 | | | | | |
| 07 STP EFFLNT | 06 | 0930 | 7.20 | 7.66 | 753 | 6.7 | 9.8 | 34.3 | 27.5 | 25.7 | | | | | |
| 08 BEL STP | 06 | 1030 | 7.75 | 8.16 | 413 | 11.8 | 3.5 | 11.1 | 11.3 | 10.6 | | | | | |
| 09 SHUFFIELDS | 06 | 1115 | 8.50 | 8.67 | 344 | 13.5 | <2.0 | <5. | 8.4 | 6.4 | | | | | |
| 10 BITTERROOT | 05 | 1545 | 8.05 | 8.15 | 148 | 12.6 | <2.0 | 11.5 | 5.9 | 5.8 | | | | | |
| 11 HARPER BR | 06 | 1745 | 8.60 | 8.66 | 271 | 13.7 | 2.3 | <5. | 6.6 | 5.7 | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 06 | 1430 | 7.67 | 8.05 | 2528 | | 113. | 852. | 787. | 755. | | | | | |
| 13 MARCURE | 06 | 2000 | 8.44 | 8.45 | 316 | 12.3 | <2.0 | 18.4 | 21.6 | 19.8 | | | | | |
| 14 FRENCHTOWN | 07 | 1430 | | | | | | | | | | | | | |
| 15 HUSON | 07 | 0015 | 8.25 | 8.44 | 284 | 12.0 | <2.0 | <5. | 9.1 | 9.0 | | | | | |
| 16 9-MILE | 07 | 0300 | 8.32 | 8.34 | 280 | 12.1 | <2.0 | <5. | 9.1 | 8.4 | | | | | |
| 17 ABV ALBERT | 07 | 0500 | 8.20 | 8.33 | 281 | 12.5 | <2.0 | <5. | 9.3 | 8.9 | | | | | |
| 18 TARKIO | 07 | 1130 | 8.20 | 8.32 | 270 | 12.6 | <2.0 | <5. | 8.4 | 8.4 | | | | | |
| 19 LOZEAU | 07 | 1600 | 8.45 | 8.46 | 277 | 13.1 | <2.0 | <5. | 8.6 | 8.7 | | | | | |
| 20 SUPERIOR | 07 | 1800 | 8.67 | 8.65 | 268 | 13.3 | <2.0 | <5. | 8.4 | 9.0 | | | | | |
| 21 BEL ST REG | 08 | 0900 | 8.15 | 8.30 | 273 | 11.8 | <2.0 | <5. | [illegible] | 7.4 | | | | | |
| 22 ABV FLATHD | 08 | 1045 | 8.33 | 8.56 | 262 | 12.5 | <2.0 | <5. | [illegible] | 6.6 | | | | | |
| 23 FLATHEAD R | 08 | 1145 | 8.05 | 8.26 | 174 | 12.6 | <2.0 | <5. | 0.5 | 0.5 | | | | | |
| 24 PLAINS | 08 | 1300 | 8.36 | 8.41 | 195 | 13.2 | <2.0 | <5. | 2.0 | 1.9 | | | | | |
| 25 ABV T FALL | 08 | 1530 | 8.28 | 8.37 | 192 | 13.0 | <2.0 | <5. | 2.2 | 2.4 | | | | | |
| 26 IN T FALLS | 08 | 1630 | 8.23 | 8.36 | 200 | 12.6 | <2.0 | <5. | 2.0 | 1.9 | | | | | |
| 27 BEL T FALL | 09 | 0845 | 8.27 | 8.44 | 202 | 12.7 | <2.0 | <5. | 1.9 | 1.9 | | | | | |
| 28 IN NOXON | 09 | 1130 | 8.10 | 8.29 | 194 | 12.5 | <2.0 | <5. | 1.8 | 1.9 | | | | | |
| 29 BEL NOXON | 09 | 1215 | 8.10 | 8.20 | 195 | 11.9 | <2.0 | <5. | 0.5 | 0.3 | | | | | |
| 30 IN CAB GOR | 09 | 1330 | 8.04 | 8.27 | 190 | 12.9 | <2.0 | <5. | 1.7 | 1.5 | | | | | |
| 31 BEL CAB GO | | | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR([illegible]OR UNITS). A.S. MEANS A[illegible] SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON APRIL 4-6, 1984

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 04 | 1000 | 967. | 6.5 | 10.2 | 2.3 | 0.01 | 0.01 | 0.2 | 0.009 | 0.02 | | | | | | | |
| 02 BLACKFOOT | 04 | 1030 | 816. | 5.0 | 9.1 | 2.3 | <0.01 | <0.01 | 0.2 | 0.003 | 0.01 | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 04 | 1200 | 1890. | 7.0 | 7.7 | 1.4 | 0.04 | 0.01 | 0.4 | 0.006 | 0.01 | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 04 | 1230 | 1890. | 8.0 | 8.9 | 1.6 | <0.01 | 0.01 | 0.3 | 0.006 | 0.01 | | | | | | | |
| 07 STP EFFLNT | 04 | 1300 | 11.14 | 12.5 | 54.8 | 48.2 | 0.01 | 13. | 24. | 5.23 | 7.50 | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 04 | 1330 | 1900. | 9.0 | 8.0 | 1.7 | 0.01 | 0.06 | 0.3 | 0.025 | 0.03 | | | | | | | |
| 10 BITTERROOT | 04 | 1400 | 1440. | 9.0 | 6.0 | 1.4 | 0.03 | 0.01 | 0.3 | 0.006 | 0.01 | | | | | | | |
| 11 HARPER BR | 04 | 1430 | 3340. | 9.0 | 8.4 | 1.7 | 0.02 | 0.01 | 0.3 | 0.012 | 0.02 | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 04 | 1500 | 0.0 | 12.0 | 166.3 | 151. | 0.01 | 4.4 | 22. | 2.30 | 4.30 | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 04 | 1545 | 3340. | 9.0 | 9.4 | 2.0 | 0.01 | 0.01 | 0.4 | 0.021 | 0.03 | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 04 | 1730 | 4380. | 8.5 | 7.8 | 1.6 | 0.01 | 0.01 | 0.4 | 0.010 | 0.01 | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 04 | 2015 | 6620. | 7.5 | 1.8 | .6 | 0.01 | 0.01 | 0.2 | 0.001 | <0.01 | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 05 | 0845 | 11200. | 8.0 | 4.6 | 1.0 | 0.01 | 0.01 | 0.3 | 0.001 | <0.01 | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 05 | 1130 | 11063. | 8.0 | 3.5 | .9 | <0.01 | <0.01 | 0.2 | 0.001 | <0.01 | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 06 | 1530 | 15500. | 6.0 | .8 | .5 | 0.04 | <0.01 | 0.1 | 0.001 | <0.01 | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 06 | 1330 | 16600. | 6.0 | 1.8 | .7 | 0.01 | 0.02 | 0.2 | 0.002 | <0.01 | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. WHEN CHAMPION WAS NOT DIRECT DISCHARGING AS INDICATED BY 0.0 FLOW, SAMPLES WERE COLLECTED FROM STORAGE PONDS.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON APRIL 4-6, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 04 | 1000 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 04 | 1030 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 04 | 1200 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 04 | 1230 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 04 | 1300 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 04 | 1330 | | | | | | | | | | | | | |
| 10 BITTERROOT | 04 | 1400 | | | | | | | | | | | | | |
| 11 HARPER BR | 04 | 1420 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 04 | 1500 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 04 | 1545 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 04 | 1730 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 04 | 2015 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 05 | 0845 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 05 | 1130 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 06 | 1530 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 06 | 1330 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON APRIL 17-18, 1984

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 17 | 0930 | 1765. | 9.5 | 71.2 | 10.4 | <0.01 | 0.02 | 0.5 | 0.053 | 0.11 | | | | | | | |
| 02 BLACKFOOT | 17 | 1030 | 1270. | 9.0 | 20.0 | 4.0 | <0.01 | 0.02 | 0.2 | 0.013 | 0.03 | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 17 | 1100 | 2950. | 10.5 | 19.4 | 2.9 | <0.01 | 0.02 | 0.2 | 0.018 | 0.03 | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 17 | 1130 | 2950. | 10.5 | 25.3 | 3.8 | <0.01 | 0.01 | 0.2 | 0.017 | 0.03 | | | | | | | |
| 07 STP EFFLNT | 17 | 1145 | 13.30 | 14.0 | 20.9 | 17.3 | <0.1 | 9.4 | 17. | 0.49 | 1.2 | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 17 | 1215 | 2960. | 11.0 | 30.4 | 4.0 | <0.01 | 0.05 | 0.2 | 0.019 | 0.04 | | | | | | | |
| 10 BITTERROOT | 17 | 1245 | 2080. | 11.0 | 56.0 | 9.1 | 0.01 | 0.02 | 0.4 | 0.022 | 0.06 | | | | | | | |
| 11 HARPER BR | 17 | 1400 | 5040. | 12.0 | 38.0 | 4.9 | 0.01 | 0.02 | 0.4 | 0.024 | 0.06 | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 17 | 1000 | 1.60 | | 97.9 | 91.9 | 0.1 | | 7.0 | | 1.0 | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 17 | 1540 | 5040. | 12.0 | 64.7 | 9.4 | <0.01 | 0.02 | 0.4 | 0.033 | 0.07 | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 17 | 1700 | 6050. | 11.0 | 25.1 | 3.7 | <0.01 | 0.01 | 0.2 | 0.013 | 0.04 | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 17 | 1745 | 6350. | 8.5 | 3.2 | .5 | 0.01 | 0.01 | 0.1 | 0.002 | 0.01 | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 17 | 1830 | 12400. | 10.5 | 5.6 | 1.2 | <0.01 | 0.01 | 0.1 | <0.001 | 0.02 | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 18 | 0845 | 14874. | 10.0 | 7.2 | 1.3 | <0.01 | 0.01 | 0.1 | 0.001 | 0.02 | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 18 | 1000 | 13900. | 12.0 | 2.2 | .8 | <0.01 | 0.01 | 0.1 | <0.001 | 0.01 | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 18 | 1045 | 18300. | 8.0 | 2.7 | .9 | <0.01 | <0.01 | 0.1 | <0.001 | 0.02 | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON APRIL 17-18, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 17 | 0930 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 17 | 1030 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 17 | 1100 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 17 | 1130 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 17 | 1145 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 17 | 1215 | | | | | | | | | | | | | |
| 10 BITTERROOT | 17 | 1245 | | | | | | | | | | | | | |
| 11 HARPER BR | 17 | 1400 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 17 | 1000 | 7.7 | | | | 34.1 | | 1130. | 1060. | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 17 | 1540 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 17 | 1700 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 17 | 1745 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 17 | 1830 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 18 | 0845 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 18 | 1000 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 18 | 1045 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL, PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON MAY 16-17, 1984

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 16 | 1000 | 7150. | 7.0 | 555. | 47.1 | 0.03 | 0.04 | 1.9 | 0.37 | 0.51 | | 4.41 | 0.23 | 0.40 | 0.84 | <0.005 | 0.045 |
| 02 BLACKFOOT | 16 | 1045 | 5110. | 7.0 | 138. | 12.0 | 0.02 | 0.02 | 0.8 | 0.062 | 0.07 | | 0.82 | <0.01 | <0.005 | 0.10 | <0.005 | 0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 16 | 1130 | 11300. | 7.0 | 256. | 26.5 | 0.03 | 0.05 | 1.3 | 0.19 | 0.27 | | 2.54 | 0.12 | 0.22 | 0.49 | <0.005 | 0.020 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 16 | 1200 | 11300. | 7.0 | 269. | 27.9 | 0.02 | 0.03 | 1.3 | 0.19 | 0.25 | | 2.62 | 0.12 | 0.24 | 0.48 | <0.005 | 0.019 |
| 07 STP EFFLNT | 16 | 1220 | 12.06 | 14.5 | 20.7 | 17.0 | 0.01 | 13. | 18. | 3.07 | 4.00 | | 0.11 | 0.01 | 0.05 | 0.02 | <0.005 | 0.001 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 16 | 1300 | 11310. | 7.0 | 254. | 27.2 | 0.03 | 0.03 | 1.6 | 0.19 | 0.26 | | 2.69 | 0.12 | 0.22 | 0.48 | <0.005 | 0.020 |
| 10 BITTERROOT | 16 | 1330 | 10090. | 6.0 | 116. | 12.5 | 0.07 | 0.02 | 0.7 | 0.048 | 0.09 | | 1.11 | <0.01 | <0.005 | 0.07 | <0.005 | <0.001 |
| 11 HARPER BF | 16 | 1440 | 21400. | 7.0 | 175. | 19.7 | 0.04 | 0.03 | 1.0 | 0.10 | 0.17 | | 1.68 | 0.06 | 0.12 | 0.28 | <0.005 | 0.01 |
| 12 CHAMP 001 | 16 | 1600 | 28.96 | 13.0 | 157. | 143. | 0.01 | 6.2 | 21. | 2.43 | 3.97 | | 0.33 | <0.01 | 0.04 | 0.69 | <0.005 | 0.002 |
| 12 CHAMP 003 | 16 | 1530 | 48.12 | 13.0 | 125. | 111. | <0.01 | 2.9 | 11. | 0.87 | 1.98 | | 0.40 | <0.01 | 0.13 | 0.94 | <0.005 | 0.006 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 16 | 1700 | 21480. | 8.0 | 246. | 22.8 | 0.06 | 0.05 | 1.2 | 0.17 | 0.21 | | 2.36 | 0.08 | 0.15 | 0.32 | <0.005 | 0.010 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 16 | 1845 | 23000. | 8.0 | 220. | 21.2 | 0.06 | 0.02 | 1.1 | 0.096 | 0.16 | | 1.92 | 0.05 | 0.08 | 0.28 | <0.005 | 0.004 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 16 | 1845 | 6300. | 9.0 | 10.2 | 1.1 | 0.03 | 0.01 | 0.2 | 0.007 | 0.02 | | 0.11 | <0.01 | <0.005 | 0.01 | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 17 | 0845 | 34000. | 8.0 | 137. | 13.4 | 0.06 | 0.02 | 0.8 | 0.075 | 0.12 | | 1.40 | 0.03 | 0.06 | 0.21 | <0.005 | 0.004 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 17 | 1015 | 33044. | 8.5 | 61.1 | 6.6 | 0.07 | 0.02 | 0.6 | 0.031 | 0.07 | | 0.60 | 0.01 | 0.01 | 0.09 | <0.005 | 0.002 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 17 | 1300 | 40800. | 10.0 | 3.1 | 0.8 | 0.03 | <0.01 | 0.1 | 0.003 | 0.01 | | 0.05 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 17 | 1140 | 45900. | 9.5 | 3.3 | 0.8 | 0.03 | 0.02 | 0.2 | <0.001 | 0.01 | | 0.06 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON MAY 16-17, 1984

| STATION | DAY | TIME | PH FID | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 16 | 1000 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 16 | 1045 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 16 | 1130 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 16 | 1200 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 16 | 1220 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 16 | 1300 | | | | | | | | | | | | | |
| 10 BITTERROOT | 16 | 1330 | | | | | | | | | | | | | |
| 11 HARPER BR | 16 | 1440 | | | | | | | | | | | | | |
| 12 CHAMP 001 | 16 | 1600 | | | | | | | | | | | | | |
| 12 CHAMP 003 | 16 | 1530 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 16 | 1700 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 16 | 1845 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 16 | 1845 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 17 | 0845 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 17 | 1015 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 17 | 1300 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 17 | 1140 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JUNE 4-5, 1984

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 04 | 1015 | 4090. | 9.5 | 28.8 | 3.6 | 0.02 | <0.01 | 0.4 | 0.041 | 0.05 | | 0.31 | 0.02 | 0.03 | 0.06 | <0.005 | 0.006 |
| 02 BLACKFOOT | 04 | 1045 | 4620. | 9.5 | 29.0 | 2.7 | 0.02 | <0.01 | 0.3 | 0.019 | 0.03 | | 0.19 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 04 | 1115 | 8750. | 10.0 | 30.6 | 3.3 | 0.02 | <0.01 | 0.3 | 0.024 | 0.04 | | 0.27 | <0.01 | 0.02 | 0.05 | <0.005 | 0.003 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 04 | 1145 | 8750. | 10.0 | 30.0 | 3.2 | 0.02 | <0.01 | 0.3 | 0.024 | 0.04 | | 0.28 | <0.01 | 0.02 | 0.04 | <0.005 | 0.003 |
| 07 STP EFFLNT | 04 | 1215 | 12.38 | 14.0 | 15.7 | 12.6 | 0.03 | 17.9 | 18. | 4.68 | 6.10 | | 0.05 | 0.01 | 0.09 | 0.02 | <0.005 | 0.001 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 04 | 1300 | 8760. | 10.0 | 32.6 | 3.6 | 0.02 | 0.02 | 0.3 | 0.036 | 0.05 | | 0.29 | <0.01 | 0.02 | 0.05 | <0.005 | 0.003 |
| 10 BITTERROOT | 04 | 1320 | 9840. | 9.0 | 37.2 | 3.4 | 0.04 | <0.01 | 0.2 | 0.021 | 0.003 | | 0.33 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |
| 11 HARPER BR | 04 | 1415 | 18600. | 10.0 | 29.5 | 3.2 | 0.04 | 0.02 | 0.3 | 0.034 | 0.04 | | 0.30 | <0.01 | 0.02 | 0.04 | <0.005 | 0.002 |
| 12 CHAMP 001 | 04 | 1500 | 6.37 | 16.0 | 170. | 149. | 0.01 | 4.2 | 19. | 2.18 | 4.20 | | 0.34 | <0.01 | 0.04 | 0.69 | <0.005 | 0.004 |
| 12 CHAMP 003 | 04 | 1450 | 44.55 | 15.0 | 146. | 128. | 0.02 | 4.5 | 14. | 1.05 | 3.75 | | 0.34 | <0.01 | 0.04 | 0.84 | <0.005 | 0.004 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 04 | 1630 | 18651. | 10.5 | 55.6 | 4.3 | 0.04 | 0.02 | 0.3 | 0.036 | 0.06 | | 0.39 | <0.01 | 0.02 | 0.04 | <0.005 | 0.002 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 04 | 1820 | 24200. | 10.5 | 48.9 | 4.0 | 0.04 | 0.02 | 0.3 | 0.034 | 0.05 | | 0.36 | <0.01 | 0.01 | 0.04 | <0.005 | 0.002 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 04 | 1900 | 13300. | 13.0 | 10.0 | 1.4 | <0.01 | <0.01 | 0.2 | 0.007 | 0.02 | | 0.05 | <0.01 | <0.005 | 0.01 | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 04 | 2000 | 37500. | 11.0 | 44.6 | 3.5 | 0.03 | 0.01 | 0.4 | 0.024 | 0.04 | | 0.34 | <0.01 | 0.09 | 0.04 | <0.005 | 0.002 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 05 | 0745 | 38122. | 11.0 | 41.4 | 3.6 | 0.04 | 0.01 | 0.3 | 0.024 | 0.04 | | 0.28 | <0.01 | 0.01 | 0.03 | <0.005 | 0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 05 | 0900 | 38000. | 11.0 | 9.9 | 1.1 | 0.05 | 0.02 | 0.3 | 0.023 | 0.03 | | 0.13 | <0.01 | 0.008 | 0.02 | <0.005 | 0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 05 | 1030 | 45100. | 11.0 | 8.7 | 1.4 | 0.05 | 0.02 | 0.2 | 0.016 | 0.03 | | 0.12 | <0.01 | 0.009 | 0.02 | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JUNE 4-5, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 04 | 1015 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 04 | 1045 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 04 | 1115 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 04 | 1145 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 04 | 1215 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 04 | 1300 | | | | | | | | | | | | | |
| 10 BITTERROOT | 04 | 1320 | | | | | | | | | | | | | |
| 11 HARPER BR | 04 | 1415 | | | | | | | | | | | | | |
| 12 CHAMP 001 | 04 | 1500 | | | | | | | | | | | | | |
| 12 CHAMP 003 | 04 | 1450 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 04 | 1630 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 04 | 1820 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 04 | 1900 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 04 | 2000 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 05 | 0745 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 05 | 0900 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 05 | 1030 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JUNE 20-21, 1984

| | STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 20 | 0945 | 5030. | 12.0 | 34.9 | 3.5 | 0.02 | 0.02 | 0.3 | 0.036 | 0.04 | 87 | 0.36 | 0.02 | 0.04 | 0.08 | <0.005 | 0.008 |
| 02 | BLACKFOOT | 20 | 1020 | 4180. | 12.4 | 19.8 | 2.0 | 0.01 | 0.02 | 0.2 | 0.014 | 0.02 | 85 | 0.14 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |
| 03 | IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 | BEL MILLTN | 20 | 1100 | 8900. | 12.5 | 28.8 | 3.1 | 0.01 | 0.01 | 0.2 | 0.024 | 0.03 | 84 | 0.28 | 0.02 | 0.08 | 0.06 | <0.005 | 0.004 |
| 05 | ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 | ABV STP | 20 | 1130 | 8900. | 12.2 | 28.0 | 3.0 | 0.01 | 0.03 | 0.2 | 0.024 | 0.03 | 77 | 0.28 | 0.01 | 0.03 | 0.06 | <0.005 | 0.004 |
| 07 | STP EFFLNT | 20 | 1200 | 12.68 | 16.0 | 13. | 9.1 | 0.23 | 8.2 | 9.5 | 1.78 | 2.75 | 149 | 0.07 | <0.01 | 0.07 | 0.02 | <0.005 | 0.001 |
| 08 | BEL STP | | | | | | | | | | | | | | | | | | |
| 09 | SHUFFIELDS | 20 | 1230 | 8910. | 13.0 | 30.2 | 3.1 | 0.02 | 0.06 | 0.3 | 0.027 | 0.03 | 80 | 0.29 | 0.02 | 0.07 | 0.06 | <0.005 | 0.005 |
| 10 | BITTERROOT | 20 | 1300 | 11390. | 12.0 | 29.4 | 2.4 | 0.02 | <0.01 | 0.2 | 0.014 | 0.02 | 18 | 0.27 | <0.01 | 0.005 | 0.01 | <0.005 | <0.001 |
| 11 | HARPER BR | 20 | 1515 | 20300. | 14.0 | 25.6 | 2.5 | 0.02 | <0.01 | 0.2 | 0.020 | 0.03 | 59 | 0.25 | 0.01 | 0.02 | 0.04 | <0.005 | 0.003 |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 20 | 1445 | 15.59 | 20.0 | 83.1 | 68.8 | 0.01 | 3.37 | 16.4 | 0.92 | 3.81 | 203 | 0.36 | <0.01 | 0.04 | 0.79 | <0.005 | 0.004 |
| 13 | MARCURE | | | | | | | | | | | | | | | | | | |
| 14 | FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 | HUSON | 20 | 1645 | 20320. | 14.0 | 44.3 | 3.9 | 0.02 | 0.04 | 0.3 | 0.024 | 0.03 | 50 | 0.31 | 0.01 | 0.04 | 0.04 | <0.005 | 0.002 |
| 16 | 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 | ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | | | | | | | | |
| 19 | LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 | SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 | BEL ST REG | 20 | 1830 | 24400. | 13.5 | 47.0 | 2.9 | 0.02 | 0.02 | 0.2 | 0.024 | 0.03 | 50 | 0.32 | 0.01 | 0.01 | 0.04 | <0.005 | 0.002 |
| 22 | ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 | FLATHEAD R | 20 | 1915 | 18500. | 15.5 | 7.8 | 0.7 | 0.02 | 0.09 | 0.2 | 0.008 | 0.01 | 83 | 0.06 | <0.01 | 0.01 | 0.01 | <0.005 | <0.001 |
| 24 | PLAINS | | | | | | | | | | | | | | | | | | |
| 25 | ABV T FALL | 20 | 2000 | 42900. | 14.0 | 37.6 | 2.6 | 0.02 | <0.01 | 0.2 | 0.017 | 0.03 | 65 | 0.24 | <0.01 | 0.06 | 0.03 | <0.005 | 0.001 |
| 26 | IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 | BEL T FALL | 21 | 0845 | 42376. | 14.0 | 40.3 | 2.8 | 0.02 | 0.02 | 0.3 | 0.020 | 0.03 | 64 | 0.26 | <0.01 | 0.03 | 0.03 | <0.005 | 0.001 |
| 28 | IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 | BEL NOXON | 21 | 1000 | 45600. | 14.0 | 7.5 | 0.7 | 0.02 | <0.01 | 0.2 | 0.008 | 0.01 | 66 | 0.08 | <0.01 | <0.005 | 0.02 | <0.005 | 0.001 |
| 30 | IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 | BEL CAB GO | 21 | 1100 | 51800. | 14.0 | 7.1 | 0.7 | 0.02 | 0.09 | 0.3 | 0.011 | 0.01 | 64 | 0.06 | <0.01 | <0.005 | 0.01 | <0.005 | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JUNE 20-21, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 20 | 0945 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 20 | 1020 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 20 | 1100 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 20 | 1130 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 20 | 1200 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 20 | 1230 | | | | | | | | | | | | | |
| 10 BITTERROOT | 20 | 1300 | | | | | | | | | | | | | |
| 11 HARPER BR | 20 | 1515 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 20 | 1445 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 20 | 1645 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 20 | 1830 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 20 | 1915 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 20 | 2000 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 21 | 0845 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 21 | 1000 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 21 | 1100 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JULY 10-11, 1984

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 10 | 0945 | 1911. | 14.0 | 8.2 | 1.9 | 0.01 | <0.01 | 0.5 | 0.019 | 0.03 | | 0.12 | <0.01 | 0.02 | 0.03 | <0.005 | 0.007 |
| 02 BLACKFOOT | 10 | 1015 | 1940. | 14.5 | 5.6 | 1.1 | <0.01 | <0.01 | 0.2 | 0.007 | 0.01 | | 0.06 | <0.01 | 0.005 | 0.009 | <0.005 | 0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 10 | 1050 | 3840. | 14.5 | 11.8 | 1.9 | <0.01 | <0.01 | 0.3 | 0.016 | 0.02 | | 0.15 | <0.01 | 0.01 | 0.03 | <0.005 | 0.004 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 10 | 1130 | 3840. | 15.0 | 11.1 | 1.8 | <0.01 | <0.01 | 0.3 | 0.015 | 0.02 | | 0.23 | <0.01 | 0.01 | 0.03 | 0.005 | 0.005 |
| 07 STP EFFLNT | 10 | 1200 | 12.38 | 16.5 | 11.8 | 10.5 | 1.84 | 3.33 | 8.5 | 4.11 | 5.94 | | 0.07 | 0.01 | 0.07 | 0.008 | <0.005 | 0.001 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 10 | 1220 | 3850. | 15.0 | 11.7 | 2.0 | 0.01 | <0.01 | 0.5 | 0.031 | 0.04 | | 0.17 | <0.01 | 0.02 | 0.03 | <0.005 | 0.005 |
| 10 BITTERROOT | 10 | 1250 | 3920. | 16.5 | 7.8 | 1.5 | 0.04 | <0.01 | 0.3 | 0.012 | 0.02 | | 0.15 | <0.01 | <0.005 | 0.01 | <0.005 | <0.001 |
| 11 HARPER BR | 10 | 1600 | 7770. | 18.0 | 9.0 | 1.4 | 0.04 | <0.01 | 0.3 | 0.017 | 0.03 | | 0.13 | <0.01 | 0.008 | 0.02 | 0.005 | 0.003 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 10 | 1515 | 1.26 | 21.0 | 64.5 | 58.8 | <0.01 | 2.59 | 15.8 | 0.64 | 3.04 | | 0.39 | <0.01 | 0.04 | 8.0 | 0.008 | 0.006 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 10 | 1645 | 7770. | 18.2 | 13.6 | 2.3 | 0.03 | <0.01 | 0.3 | 0.019 | 0.03 | | 0.16 | <0.01 | 0.005 | 0.03 | <0.005 | 0.002 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 10 | 1830 | 9710. | 18.0 | 5.8 | 1.1 | 0.02 | <0.01 | 0.5 | 0.014 | 0.02 | | 0.08 | <0.01 | <0.005 | 0.01 | <0.005 | 0.002 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 10 | 1915 | 12590. | 20.5 | 3.6 | 0.9 | <0.01 | <0.01 | 0.2 | 0.007 | 0.01 | | 0.05 | <0.01 | <0.005 | 0.008 | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 10 | 2015 | 22300. | 18.5 | 4.9 | 0.9 | 0.01 | <0.01 | 0.2 | 0.006 | 0.01 | | 0.05 | <0.01 | <0.005 | 0.01 | <0.005 | 0.001 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 11 | 0900 | 23789. | 17.5 | 8.9 | 1.4 | 0.01 | <0.01 | 0.3 | 0.007 | 0.01 | | 0.09 | <0.01 | <0.005 | 0.01 | <0.005 | 0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 11 | 1030 | 24500. | 17.5 | 2.9 | 0.7 | 0.02 | <0.01 | 0.2 | 0.007 | 0.02 | | 0.07 | <0.01 | <0.005 | 0.02 | <0.005 | 0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 11 | 1130 | 25900. | 17.5 | 2.6 | 0.7 | 0.01 | <0.01 | 0.4 | 0.006 | 0.01 | | 0.04 | <0.01 | <0.005 | 0.01 | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JULY 10-11, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 10 | 0945 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 10 | 1015 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 10 | 1050 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 10 | 1130 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 10 | 1200 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 10 | 1220 | | | | | | | | | | | | | |
| 10 BITTERROOT | 10 | 1250 | | | | | | | | | | | | | |
| 11 HARPER BR | 10 | 1600 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 10 | 1515 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 10 | 1645 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 10 | 1830 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 10 | 1915 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 10 | 2015 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 11 | 0900 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 11 | 1030 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 11 | 1130 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JULY 16-17, 1984

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 16 | 1000 | 1476. | 15.7 | 6.9 | 1.5 | 0.01 | <0.01 | 0.2 | 0.017 | 0.03 | | 0.08 | <0.01 | 0.01 | 0.02 | 0.005 | 0.006 |
| 02 BLACKFOOT | 16 | 1045 | 1390. | 16.5 | 4.2 | 1.1 | <0.01 | <0.01 | 0.1 | 0.004 | 0.01 | | 0.04 | <0.01 | <0.005 | 0.009 | <0.005 | 0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 16 | 1130 | 2860. | 16.5 | 79.8 | 9.0 | <0.01 | 0.03 | 0.3 | 0.048 | 0.05 | | 0.70 | 0.05 | 0.10 | 0.18 | <0.005 | 0.009 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 16 | 1200 | 2860. | 17.0 | 38.8 | 5.1 | <0.01 | <0.01 | 0.3 | 0.028 | 0.04 | | 0.31 | 0.02 | 0.05 | 0.08 | <0.005 | 0.006 |
| 07 STP EFFLNT | 16 | 1230 | 13.15 | 17.5 | 12.2 | 10.6 | 5.00 | 6.70 | 9.2 | 4.13 | 5.75 | | 0.18 | 0.02 | 0.04 | 0.03 | <0.005 | 0.001 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 16 | 1315 | 2870. | 17.4 | 35.2 | 4.9 | 0.03 | 0.03 | 0.3 | 0.046 | 0.05 | | 0.38 | 0.03 | 0.05 | 0.08 | <0.005 | 0.006 |
| 10 BITTERROOT | 16 | 1400 | 2605. | 19.0 | 5.3 | 1.0 | 0.02 | <0.01 | 0.1 | 0.007 | 0.01 | | 0.06 | <0.01 | 0.01 | 0.006 | <0.005 | <0.001 |
| 11 HARPER BR | 16 | 1630 | 5480. | 19.6 | 13.4 | 2.2 | 0.03 | <0.01 | 0.2 | 0.014 | 0.03 | | 0.14 | 0.01 | 0.02 | 0.03 | <0.005 | 0.004 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 16 | 1545 | 17.15 | 22.5 | 55.1 | 48.9 | 0.01 | 2.3 | 7.1 | 0.53 | 2.83 | | 0.34 | <0.01 | 0.04 | 0.68 | 0.005 | 0.004 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 16 | 1715 | 5500. | 20.4 | 15.9 | 2.4 | 0.02 | <0.01 | 0.2 | 0.017 | 0.03 | | 0.16 | <0.01 | 0.02 | 0.04 | <0.005 | 0.003 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 16 | 1845 | 6900. | 20.5 | 5.2 | 1.2 | <0.01 | <0.01 | 0.1 | 0.006 | 0.02 | | 0.05 | <0.01 | 0.006 | 0.01 | <0.005 | 0.003 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 16 | 1950 | 10200. | 22.8 | 1.9 | 0.5 | <0.01 | <0.01 | 0.1 | 0.004 | 0.01 | | 0.04 | <0.01 | <0.005 | 0.006 | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 16 | 2040 | 17100. | 21.0 | 2.6 | 0.6 | <0.01 | <0.01 | 0.1 | <0.001 | 0.01 | | 0.03 | <0.01 | 0.006 | 0.009 | <0.005 | 0.001 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 17 | 0900 | 18175. | 20.6 | 4.2 | 0.8 | <0.01 | <0.01 | 0.1 | <0.001 | <0.01 | | 0.05 | <0.01 | <0.005 | 0.01 | <0.005 | 0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 17 | 1000 | 14500. | 17.7 | 2.0 | 0.5 | 0.02 | <0.01 | 0.1 | <0.001 | 0.01 | | 0.03 | <0.01 | 0.005 | 0.02 | <0.005 | 0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 17 | 1100 | 17100. | 18.0 | 2.1 | 0.6 | <0.01 | <0.01 | 0.1 | <0.001 | 0.01 | | 0.03 | <0.01 | <0.005 | 0.01 | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JULY 16-17, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 16 | 1000 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 16 | 1045 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 16 | 1130 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 16 | 1200 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 16 | 1230 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 16 | 1315 | | | | | | | | | | | | | |
| 10 BITTERROOT | 16 | 1400 | | | | | | | | | | | | | |
| 11 HARPER BR | 16 | 1630 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 16 | 1545 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 16 | 1715 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 16 | 1845 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 16 | 1950 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 16 | 2040 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 17 | 0900 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 17 | 1000 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 17 | 1100 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JUL 30-AUG 2,1984

| | STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 30 | 1030 | 1235. | 16.0 | 12.2 | 2.4 | 0.02 | 0.03 | 0.4 | 0.017 | 0.03 | 139 | 0.15 | 0.01 | 0.02 | 0.05 | <0.005 | 0.008 |
| 02 | BLACKFOOT | 30 | 1145 | 1080. | 17.0 | 5.0 | 1.2 | 0.02 | 0.03 | 0.3 | 0.003 | <0.01 | 122 | 0.09 | <0.01 | <0.005 | 0.01 | <0.005 | <0.001 |
| 03 | IN MILLTWN | 30 | 1300 | | 17.0 | 4.0 | 1.0 | 0.02 | <0.01 | 0.4 | 0.013 | 0.02 | 139 | 0.07 | 0.01 | 0.01 | 0.05 | <0.005 | 0.008 |
| 04 | BEL MILLTN | 30 | 1230 | 2320. | 17.0 | 6.6 | 1.2 | 0.02 | <0.01 | 0.4 | 0.009 | 0.01 | 131 | 0.08 | 0.01 | 0.03 | 0.03 | <0.005 | 0.005 |
| 05 | ABV MSLA | 30 | 1420 | 2320. | 18.0 | 9.2 | 1.4 | 0.01 | <0.01 | 0.5 | 0.009 | 0.01 | 132 | 0.11 | <0.01 | 0.06 | 0.04 | <0.005 | 0.005 |
| 06 | ABV STP | 30 | 1535 | 2320. | 19.0 | 8.0 | 1.3 | 0.01 | <0.01 | 0.6 | 0.008 | 0.01 | 130 | 0.09 | <0.01 | 0.01 | 0.03 | <0.005 | 0.005 |
| 07 | STP EFFLNT | 30 | 1535 | 11.14 | 18.0 | 23.0 | 22.5 | 3.68 | 9.1 | 20.2 | 6.65 | 8.00 | 161 | 0.13 | 0.03 | 0.09 | 0.03 | <0.005 | 0.002 |
| 08 | BEL STP | 30 | 1550 | 2330. | 19.0 | 9.8 | 3.0 | 0.43 | 1.08 | 2.2 | 0.77 | 0.87 | 131 | 0.08 | 0.01 | 0.02 | 0.03 | <0.005 | 0.006 |
| 09 | SHUFFIELDS | 30 | 1655 | 2330. | 19.0 | 8.2 | 1.5 | 0.03 | 0.04 | 0.6 | 0.047 | 0.05 | 130 | 0.09 | <0.01 | 0.01 | 0.03 | <0.005 | 0.005 |
| 10 | BITTERROOT | 30 | 1745 | 1730. | 20.0 | 3.5 | 1.0 | 0.06 | 0.03 | 0.6 | 0.012 | 0.01 | 53 | 0.09 | <0.01 | <0.005 | 0.01 | <0.005 | <0.001 |
| 11 | HARPER BR | 30 | 2130 | 4060. | 19.5 | 11.2 | 3.4 | 0.06 | 0.02 | 0.7 | 0.023 | 0.02 | 102 | 0.10 | <0.01 | 0.007 | 0.03 | <0.005 | 0.003 |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 30 | 2230 | 1.06 | 21.0 | 33.1 | 31.8 | <0.01 | 2.8 | 16.0 | 1.10 | 3.20 | 217 | 0.53 | <0.01 | 0.04 | 1.02 | <0.005 | 0.006 |
| 13 | MARCURE | 30 | 2330 | 4060. | 19.3 | 10.8 | 2.4 | 0.05 | 0.13 | 0.5 | 0.028 | 0.03 | 102 | 0.12 | <0.01 | 0.007 | 0.05 | <0.005 | 0.003 |
| 14 | FRENCHTOWN | 31 | 1650 | | 21.0 | 5.5 | 1.2 | 0.03 | <0.01 | 4.3 | 0.016 | 0.02 | 104 | 0.08 | <0.01 | <0.005 | 0.03 | <0.005 | 0.003 |
| 15 | HUSON | 31 | 0400 | 3980. | 18.5 | 12.4 | 2.1 | 0.05 | 0.08 | 0.4 | 0.024 | 0.03 | 106 | 0.07 | <0.01 | 0.006 | 0.03 | <0.005 | 0.003 |
| 16 | 9-MILE | 31 | 0710 | 3980. | 18.0 | 13.6 | 2.3 | 0.04 | 0.01 | 0.5 | 0.022 | 0.03 | 105 | 0.13 | <0.01 | 0.007 | 0.05 | <0.005 | 0.003 |
| 17 | ABV ALBERT | 31 | 0900 | | 18.2 | 8.6 | 1.2 | 0.04 | <0.01 | 0.5 | 0.019 | 0.03 | 106 | 0.09 | <0.01 | 0.005 | 0.03 | <0.005 | 0.003 |
| 18 | TARKIO | 31 | 1845 | | 19.6 | 6.1 | 1.6 | 0.02 | <0.01 | 0.5 | 0.015 | 0.02 | 103 | 0.07 | <0.01 | <0.005 | 0.02 | <0.005 | 0.003 |
| 19 | LOZEAU | 31 | 2230 | | 19.2 | 5.8 | 1.2 | 0.02 | <0.01 | 0.4 | 0.014 | 0.02 | 103 | 0.07 | <0.01 | 0.02 | 0.02 | 0.005 | 0.003 |
| 20 | SUPERIOR | 01 | 0330 | | 18.4 | 7.2 | 1.6 | 0.02 | <0.01 | 0.4 | 0.012 | 0.02 | 103 | 0.06 | <0.01 | 0.01 | 0.02 | <0.005 | 0.003 |
| 21 | BEL ST REG | 01 | 1320 | 4630. | 18.5 | 4.1 | 1.4 | 0.01 | 0.01 | 0.1 | 0.010 | 0.02 | 96 | 0.03 | <0.01 | <0.005 | 0.02 | <0.005 | 0.002 |
| 22 | ABV FLATHD | 01 | 2200 | 4630. | 18.3 | 4.3 | 1.4 | 0.02 | 0.13 | 0.1 | 0.008 | 0.01 | 100 | 0.03 | <0.01 | <0.005 | 0.02 | <0.005 | 0.002 |
| 23 | FLATHEAD R | 01 | 1430 | 7370. | 22.2 | 1.5 | 0.8 | 0.01 | <0.01 | 0.1 | 0.004 | <0.01 | 82 | 0.04 | <0.01 | <0.005 | 0.009 | <0.005 | <0.001 |
| 24 | PLAINS | 01 | 1600 | 12000. | 21.4 | 3.6 | 1.0 | 0.02 | <0.01 | 0.1 | 0.003 | 0.04 | 90 | 0.03 | 0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 25 | ABV T FALL | 01 | 1730 | 12000. | 22.0 | 1.5 | 0.8 | 0.02 | <0.01 | 0.1 | 0.003 | 0.01 | 88 | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 26 | IN T FALLS | 01 | 2000 | | 21.4 | 5.8 | 1.2 | 0.01 | <0.01 | 0.1 | 0.007 | 0.02 | 88 | 0.05 | <0.01 | <0.005 | 0.009 | <0.005 | 0.001 |
| 27 | BEL T FALL | 02 | 0900 | 12533. | 21.0 | 4.4 | 1.2 | 0.01 | 0.03 | 0.1 | 0.007 | 0.01 | 90 | 0.03 | <0.01 | <0.005 | 0.006 | <0.005 | 0.002 |
| 28 | IN NOXON | 02 | 1045 | | 22.3 | 1.4 | 0.9 | 0.01 | <0.01 | 0.1 | 0.004 | 0.01 | 88 | 0.02 | <0.01 | <0.005 | 0.005 | <0.005 | 0.001 |
| 29 | BEL NOXON | 02 | 1145 | 17500. | 20.0 | 1.2 | 0.7 | 0.02 | <0.01 | 0.1 | 0.004 | <0.01 | 84 | 0.01 | <0.01 | 0.005 | 0.006 | <0.005 | 0.002 |
| 30 | IN CAB GOR | 02 | 1300 | | 20.0 | 1.7 | 1.0 | 0.02 | <0.01 | 0.2 | 0.003 | <0.01 | 82 | 0.02 | <0.01 | 0.006 | 0.02 | <0.005 | 0.002 |
| 31 | BEL CAB GO | 02 | 1400 | 18800. | 20.0 | 1.6 | 1.0 | 0.01 | <0.01 | 0.1 | 0.003 | <0.01 | 81 | 0.02 | <0.01 | <0.005 | 0.02 | <0.005 | 0.002 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JUL 30-AUG 2,1984

| | STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NA1 | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 30 | 1030 | 8.30 | 8.36 | 322 | 9.10 | <2.0 | 6.2 | | | | | | | |
| 02 | BLACKFOOT | 30 | 1145 | 8.60 | 8.48 | 254 | 9.30 | <2.0 | 8.8 | | | | | | | |
| 03 | IN MILLTWN | 30 | 1300 | 8.15 | 8.20 | 319 | 8.30 | <2.0 | 6.1 | | | | | | | |
| 04 | BEL MILLTN | 30 | 1230 | 8.35 | 8.37 | 287 | 8.95 | <2.0 | <5.0 | | | | | | | |
| 05 | ABV MSLA | 30 | 1420 | 8.55 | 8.48 | 289 | 9.40 | <2.0 | <5.0 | | | | | | | |
| 06 | ABV STP | 30 | 1535 | 8.55 | 8.53 | 280 | 9.40 | <2.0 | <5.0 | | | | | | | |
| 07 | STP EFFLNT | 30 | 1535 | 7.30 | 6.96 | 695 | 5.05 | 38.1 | 115. | | | | | | | |
| 08 | BEL STP | 30 | 1550 | 8.20 | 7.39 | 325 | 9.10 | 8.0 | 13.5 | | | | | | | |
| 09 | SHUFFIELDS | 30 | 1655 | 8.55 | 8.37 | 306 | 9.40 | <2.0 | <5.0 | | | | | | | |
| 10 | BITTERROOT | 30 | 1745 | 8.40 | 8.04 | 130 | 9.55 | <2.0 | 8.5 | | | | | | | |
| 11 | HARPER BR | 30 | 2130 | 8.30 | 8.32 | 229 | 8.90 | <2.0 | <5.0 | | | | | | | |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 30 | 2230 | 8.35 | 7.81 | 3154 | | 38.9 | 567. | 1480. | 1510. | | | | | |
| 13 | MARCURE | 30 | 2330 | 8.30 | 8.29 | 246 | 8.10 | <2.0 | <5.0 | 16.5 | 14.7 | | | | | |
| 14 | FRENCHTOWN | 31 | 1650 | 8.40 | 8.44 | 232 | 10.20 | <2.0 | <5.0 | | | | | | | |
| 15 | HUSON | 31 | 0400 | 8.20 | 8.24 | 240 | 7.75 | <2.0 | <5.0 | 12.9 | 11.8 | | | | | |
| 16 | 9-MILE | 31 | 0710 | 8.10 | 8.18 | 244 | 7.55 | <2.0 | <5.0 | | | | | | | |
| 17 | ABV ALBERT | 31 | 0900 | 8.25 | 8.26 | 248 | 8.10 | <2.0 | 7.4 | | | | | | | |
| 18 | TARKIO | 31 | 1845 | 8.55 | 8.52 | 226 | 9.15 | <2.0 | 5.3 | | | | | | | |
| 19 | LOZEAU | 31 | 2230 | 8.50 | 8.49 | 225 | 8.40 | <2.0 | <5.0 | | | | | | | |
| 20 | SUPERIOR | 01 | 0330 | 8.20 | 8.37 | 220 | 7.85 | <2.0 | <5.0 | | | | | | | |
| 21 | BEL ST REG | 01 | 1320 | 8.45 | 8.42 | 224 | 9.05 | <2.0 | 5.0 | | | | | | | |
| 22 | ABV FLATHD | 01 | 2200 | 8.45 | 8.43 | 220 | 8.40 | <2.0 | <5.0 | | | | | | | |
| 23 | FLATHEAD R | 01 | 1430 | 8.75 | 8.66 | 164 | 10.40 | <2.0 | <5.0 | | | | | | | |
| 24 | PLAINS | 01 | 1600 | 8.45 | 8.48 | 188 | 8.35 | <2.0 | <5.0 | | | | | | | |
| 25 | ABV T FALL | 01 | 1730 | 8.55 | 8.64 | 187 | 9.30 | <2.0 | <5.0 | | | | | | | |
| 26 | IN T FALLS | 01 | 2000 | 8.35 | 8.39 | 190 | 7.80 | <2.0 | <5.0 | | | | | | | |
| 27 | BEL T FALL | 02 | 0900 | 8.40 | 8.42 | 187 | 8.30 | <2.0 | <5.0 | | | | | | | |
| 28 | IN NOXON | 02 | 1045 | 8.50 | 8.48 | 186 | 8.55 | <2.0 | <5.0 | | | | | | | |
| 29 | BEL NOXON | 02 | 1145 | 8.20 | 8.33 | 175 | 7.50 | <2.0 | <5.0 | | | | | | | |
| 30 | IN CAB GOR | 02 | 1300 | 8.20 | 8.43 | 170 | 8.05 | <2.0 | <5.0 | | | | | | | |
| 31 | BEL CAB GO | 02 | 1400 | 8.25 | 8.48 | 171 | 8.20 | <2.0 | <5.0 | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS) A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON AUG. 14-15, 1984

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 14 | 1000 | 893. | 15.0 | 9.5 | 1.2 | 0.02 | <0.01 | 0.3 | 0.015 | 0.01 | | 0.11 | <0.01 | 0.01 | 0.04 | <0.005 | 0.008 |
| 02 BLACKFOOT | 14 | 1040 | 846. | 15.5 | 3.8 | 1.2 | 0.02 | <0.01 | 0.2 | <0.001 | <0.01 | | 0.03 | <0.01 | 0.01 | 0.01 | <0.005 | 0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 14 | 1115 | 1760. | 17.0 | 5.7 | 1.2 | 0.02 | 0.01 | 0.3 | 0.012 | 0.01 | | 0.07 | <0.01 | 0.008 | 0.04 | 0.005 | 0.005 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 14 | 1245 | 1760. | 18.4 | 6.1 | 1.2 | 0.01 | 0.01 | 0.3 | 0.005 | 0.01 | | 0.06 | <0.01 | 0.007 | 0.03 | <0.005 | 0.004 |
| 07 STP EFFLNT | 14 | 1315 | 12.07 | 18.4 | 21.7 | 17.4 | 1.02 | 13.2 | 17.3 | 7.22 | 9.12 | | 0.11 | 0.03 | 0.08 | 0.03 | <0.005 | 0.001 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 14 | 1345 | 1770. | 18.6 | 6.0 | 1.3 | 0.03 | 0.05 | 0.4 | 0.046 | 0.06 | | 0.06 | <0.01 | 0.008 | 0.03 | <0.005 | 0.005 |
| 10 BITTERROOT | 14 | 1415 | 1200. | 18.7 | 2.9 | 0.9 | 0.06 | 0.01 | 0.2 | 0.014 | 0.01 | | 0.09 | <0.01 | <0.005 | 0.01 | <0.005 | <0.001 |
| 11 HARPER BR | 14 | 1445 | 2970. | 18.5 | 5.5 | 1.4 | 0.06 | 0.01 | 0.3 | 0.014 | 0.01 | | 0.07 | <0.01 | 0.009 | 0.02 | <0.005 | 0.003 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 14 | 1545 | 1.40 | 19.9 | 45.5 | 41.4 | 0.02 | 3.03 | 34. | 0.44 | 3.10 | | 0.76 | <0.01 | 0.03 | 0.87 | 0.005 | 0.009 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 14 | 1615 | 2970. | 19.0 | 6.0 | 1.3 | 0.05 | 0.02 | 0.3 | 0.020 | 0.03 | | 0.08 | <0.01 | 0.005 | 0.03 | <0.005 | 0.003 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 14 | 1830 | 3680. | 19.5 | 4.4 | 1.2 | 0.02 | 0.02 | 0.4 | 0.006 | 0.01 | | 0.04 | <0.01 | <0.005 | 0.02 | <0.005 | 0.003 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 14 | 1930 | 5390. | 23.0 | 1.7 | 0.6 | 0.01 | <0.01 | 0.5 | <0.001 | <0.01 | | 0.02 | <0.01 | <0.005 | 0.008 | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 14 | 2030 | 9070. | 22.0 | 2.7 | 0.8 | 0.01 | 0.02 | 0.4 | <0.001 | <0.01 | | 0.03 | <0.01 | <0.005 | 0.01 | 0.006 | <0.001 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 15 | 0500 | 9031. | 19.8 | 2.8 | 0.8 | <0.01 | <0.01 | 0.6 | 0.009 | <0.01 | | 0.04 | <0.01 | <0.005 | 0.02 | <0.005 | 0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 15 | 0615 | 10600. | 19.2 | 1.0 | 0.5 | 0.05 | 0.01 | 0.4 | 0.007 | <0.01 | | 0.02 | <0.01 | 0.02 | 0.03 | <0.005 | 0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 15 | 0730 | 12200. | 19.2 | 1.0 | 0.6 | 0.03 | <0.01 | 0.4 | <0.001 | <0.01 | | 0.02 | <0.01 | 0.009 | 0.02 | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON AUG. 14-15, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 14 | 1000 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 14 | 1040 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 14 | 1115 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 14 | 1245 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 14 | 1315 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 14 | 1345 | | | | | | | | | | | | | |
| 10 BITTERROOT | 14 | 1415 | | | | | | | | | | | | | |
| 11 HARPER BR | 14 | 1445 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 14 | 1545 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 14 | 1615 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 14 | 1830 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 14 | 1930 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 14 | 2030 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 15 | 0500 | | | | 8.40 | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 15 | 0615 | | | | 6.45 | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 15 | 0730 | | | | 7.85 | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON SEPT 13-14, 1984

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 13 | 0930 | 987. | 10.2 | 8.0 | 1.6 | 0.02 | <0.01 | 0.2 | 0.014 | 0.01 | | 0.05 | <0.01 | 0.006 | 0.02 | <0.005 | 0.009 |
| 02 BLACKFOOT | 13 | 1040 | 683. | 9.4 | 3.0 | 1.0 | <0.01 | 0.02 | 0.1 | 0.008 | <0.01 | | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 13 | 1110 | 1710. | 11.4 | 5.2 | 1.3 | <0.01 | <0.01 | 0.1 | 0.012 | <0.01 | | 0.06 | <0.01 | <0.005 | 0.03 | <0.005 | 0.005 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 13 | 1245 | 1710. | 12.1 | 5.6 | 1.2 | <0.01 | <0.01 | 0.1 | 0.008 | <0.01 | | 0.06 | <0.01 | 0.16 | 0.03 | <0.005 | 0.005 |
| 07 STP EFFLNT | 13 | 1300 | 10.52 | 18.0 | 7.3 | 7.1 | <0.01 | 8.42 | 9.8 | 4.04 | 4.80 | | 0.09 | <0.01 | 0.08 | 0.03 | <0.005 | <0.001 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 13 | | 1720. | 12.8 | 5.3 | 1.3 | 0.01 | 0.03 | 0.2 | 0.027 | 0.03 | | 0.05 | <0.01 | 0.02 | 0.02 | <0.005 | 0.006 |
| 10 BITTERROOT | 13 | 1210 | 1430. | 12.6 | 2.8 | 0.9 | 0.03 | 0.01 | 0.1 | 0.007 | 0.01 | | 0.08 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 11 HARPER BR | 13 | 1445 | 3150. | 13.0 | 5.2 | 1.3 | 0.03 | <0.01 | 0.2 | 0.010 | 0.01 | | 0.04 | <0.01 | <0.005 | 0.006 | <0.005 | 0.003 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 13 | | 4.46 | 15.0 | 87.7 | 79.6 | <0.01 | 3.63 | 14. | 1.62 | 3.75 | | 0.49 | <0.01 | 0.03 | 0.92 | <0.005 | 0.007 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 13 | 1645 | 3155. | 13.6 | 5.7 | 1.3 | 0.03 | <0.01 | 0.3 | 0.015 | 0.02 | | 0.06 | <0.01 | 0.01 | 0.02 | <0.005 | 0.003 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARFIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 13 | 1815 | 3810. | 13.9 | 5.5 | 1.5 | <0.01 | <0.01 | 0.3 | 0.011 | 0.01 | | 0.06 | <0.01 | 0.005 | 0.01 | <0.005 | 0.003 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 13 | 1910 | 7390. | 15.2 | 1.3 | 0.7 | <0.01 | <0.01 | 0.1 | <0.001 | <0.01 | | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 13 | 2000 | 11200. | 15.0 | 3.0 | 1.0 | <0.01 | <0.01 | 0.2 | 0.002 | <0.01 | | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 14 | 0830 | 12701. | 14.0 | 3.7 | 1.0 | <0.01 | <0.01 | 0.1 | 0.002 | <0.01 | | 0.03 | <0.01 | <0.005 | 0.005 | <0.005 | <0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 14 | 0930 | 8900. | 17.3 | 3.0 | 1.0 | <0.01 | <0.01 | 0.2 | 0.005 | <0.01 | | 0.04 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 14 | 1030 | 8810. | 17.2 | 1.5 | 0.7 | 0.02 | 0.02 | 0.1 | 0.006 | <0.01 | | 0.02 | <0.01 | <0.005 | 0.009 | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON SEPT 13-14, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 13 | 0930 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 13 | 1040 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 13 | 1110 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 13 | 1245 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 13 | 1300 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 13 | | | | | | | | | | | | | | |
| 10 BITTERROOT | 13 | 1210 | | | | | | | | | | | | | |
| 11 HARPER BR | 13 | 1445 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 13 | | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 13 | 1645 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 13 | 1815 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 13 | 1910 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 13 | 2000 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 14 | 0830 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 14 | 0930 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 14 | 1030 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON OCT 15-16, 1984

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 15 | 1015 | 1092. | 5.0 | 6.3 | 1.4 | 0.01 | <0.01 | 0.1 | 0.012 | 0.02 | | 0.09 | <0.01 | 0.01 | 0.03 | <0.005 | 0.006 |
| 02 BLACKFOOT | 15 | 1100 | 667. | 4.6 | 1.9 | 1.4 | 0.01 | <0.01 | 0.1 | <0.003 | <0.01 | | 0.04 | <0.01 | 0.02 | <0.005 | <0.005 | <0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 15 | 1130 | 1820. | 5.7 | 3.6 | 1.0 | 0.01 | <0.01 | 0.1 | 0.008 | 0.02 | | 0.06 | <0.01 | 0.01 | 0.02 | <0.005 | 0.004 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 15 | 1215 | 1820. | 5.9 | 3.9 | 0.9 | 0.01 | <0.01 | 0.1 | 0.008 | 0.01 | | 0.06 | <0.01 | 0.007 | 0.02 | <0.005 | 0.004 |
| 07 STP EFFLNT | 15 | 1300 | 11.37 | 11.0 | 19.7 | 17.9 | 4.43 | 8.64 | 11.8 | 5.76 | 6.92 | | 0.08 | 0.02 | 0.05 | <0.005 | <0.005 | 0.002 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 15 | 1330 | 1830. | 6.3 | 4.2 | 1.0 | 0.04 | 0.03 | 0.1 | 0.039 | 0.05 | | 0.06 | <0.01 | 0.006 | 0.01 | <0.005 | 0.004 |
| 10 BITTERROOT | 15 | 1430 | 1430. | 7.2 | 1.4 | 0.6 | 0.04 | <0.01 | 0.1 | 0.007 | 0.02 | | 0.07 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 11 HARPER BR | 15 | 1515 | 3260. | 7.2 | 3.1 | 0.9 | 0.04 | <0.01 | 0.1 | 0.012 | 0.03 | | 0.06 | <0.01 | 0.007 | 0.009 | <0.005 | 0.003 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 15 | 1600 | 5.57 | 9.0 | 84. | 84. | 0.02 | 3.82 | 12.7 | 2.62 | 4.07 | | 0.45 | <0.01 | 0.03 | 0.85 | <0.005 | 0.005 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 15 | 1645 | 3265. | 7.2 | 3.6 | 1.2 | 0.03 | <0.01 | 0.1 | 0.018 | 0.03 | | 0.07 | <0.01 | 0.02 | 0.02 | <0.005 | 0.002 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 15 | 1815 | 3820. | 7.6 | 3.2 | 1.1 | <0.01 | <0.01 | 0.1 | 0.012 | 0.02 | | 0.05 | <0.01 | 0.008 | 0.008 | <0.005 | 0.002 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 15 | 1915 | 11680. | 9.8 | 0.8 | 0.6 | 0.01 | <0.01 | 0.1 | <0.003 | <0.01 | | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 16 | 0900 | 15000. | 8.0 | 2.1 | 0.7 | 0.01 | <0.01 | 0.1 | <0.003 | <0.01 | | 0.04 | <0.01 | 0.006 | 0.002 | <0.005 | <0.001 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 16 | 1000 | 15875. | 8.5 | 2.1 | 0.8 | 0.01 | <0.01 | 0.1 | <0.003 | <0.01 | | 0.04 | <0.01 | 0.006 | <0.005 | <0.005 | <0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 16 | 1115 | 14300. | 11.1 | 1.1 | 0.5 | 0.01 | 0.01 | 0.1 | <0.003 | <0.01 | | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 16 | 1200 | 16300. | 11.1 | 1.2 | 0.6 | 0.02 | <0.01 | 0.1 | <0.003 | <0.01 | | 0.03 | <0.01 | 0.008 | 0.006 | <0.005 | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON OCT 15-16, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 15 | 1015 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 15 | 1100 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 15 | 1130 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 15 | 1215 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 15 | 1300 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 15 | 1330 | | | | | | | | | | | | | |
| 10 BITTERROOT | 15 | 1430 | | | | | | | | | | | | | |
| 11 HARPER BR | 15 | 1515 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 15 | 1600 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 15 | 1645 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 15 | 1815 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 15 | 1915 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 16 | 0900 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 16 | 1000 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 16 | 1115 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 16 | 1200 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON OCT 29-NOV 1,1984

| | STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 29 | 1030 | 1079. | 4.0 | 5.5 | 2.0 | 0.01 | <0.01 | 0.1 | 0.010 | 0.01 | 185 | 0.07 | <0.01 | 0.008 | 0.03 | <0.005 | 0.006 |
| 02 | BLACKFOOT | 29 | 1140 | 700. | 3.0 | 1.7 | 1.3 | 0.01 | 0.01 | 0.1 | 0.003 | <0.01 | 143 | 0.04 | <0.01 | 0.02 | <0.005 | <0.005 | 0.001 |
| 03 | IN MILLTWN | 29 | 1220 | | 4.0 | 3.2 | 1.4 | 0.01 | 0.02 | 0.1 | 0.009 | 0.01 | 184 | 0.06 | <0.01 | 0.01 | 0.04 | <0.005 | 0.006 |
| 04 | BEL MILLTN | 29 | 1320 | 1840. | 4.0 | 3.1 | 1.5 | 0.01 | <0.01 | 0.1 | 0.007 | 0.01 | 165 | 0.05 | <0.01 | <0.005 | 0.02 | <0.005 | 0.004 |
| 05 | ABV MSLA | 29 | 1510 | 1840. | 4.0 | 3.4 | 1.6 | 0.01 | <0.01 | 0.1 | 0.006 | <0.01 | 168 | 0.05 | <0.01 | <0.005 | 0.02 | <0.005 | 0.004 |
| 06 | ABV STP | 29 | 1700 | 1840. | 4.0 | 3.2 | 1.5 | 0.01 | <0.01 | 0.1 | 0.006 | 0.01 | 164 | 0.04 | <0.01 | <0.005 | 0.01 | <0.005 | 0.004 |
| 07 | STP EFFLNT | 29 | 1710 | 10.75 | 16.5 | 41.5 | 42.3 | 0.02 | 17.9 | 24.5 | 8.30 | 9.93 | 174 | 0.10 | 0.03 | 0.08 | 0.009 | <0.005 | 0.001 |
| 08 | BEL STP | 29 | 1720 | 1850. | 6.0 | 7.1 | 4.5 | 0.03 | 2.12 | 3.2 | 1.07 | 1.25 | 166 | 0.05 | <0.01 | 0.01 | 0.02 | <0.005 | 0.004 |
| 09 | SHUFFIELDS | 29 | 1800 | 1850. | 4.0 | 2.9 | 1.0 | 0.01 | 0.09 | 0.2 | 0.052 | 0.05 | 165 | 0.04 | <0.01 | <0.005 | 0.01 | <0.005 | 0.004 |
| 10 | BITTERROOT | 29 | 1845 | 1340. | 6.0 | 1.1 | 1.4 | 0.04 | 0.01 | 0.1 | 0.005 | <0.01 | 64 | 0.04 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 11 | HARPER BR | 29 | 2030 | 3190. | 5.0 | 2.9 | 1.7 | 0.05 | 0.03 | 0.1 | 0.02 | 0.02 | 129 | 0.04 | <0.01 | <0.005 | 0.007 | <0.005 | 0.002 |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 29 | 2345 | 6.24 | 5.5 | 68.2 | 74.2 | 0.01 | 4.63 | 13.3 | 2.67 | 3.81 | 181 | 0.38 | <0.01 | 0.02 | 0.81 | <0.005 | 0.002 |
| 13 | MARCURE | 30 | 0015 | 3170. | 5.0 | 2.9 | 0.9 | 0.04 | 0.03 | 0.1 | 0.033 | 0.03 | 130 | 0.06 | <0.01 | <0.005 | 0.06 | <0.005 | 0.003 |
| 14 | FRENCHTOWN | 30 | 0145 | 3170. | 5.0 | 3.5 | 1.0 | 0.04 | 0.02 | 0.1 | 0.027 | 0.02 | 131 | 0.04 | <0.01 | <0.005 | 0.02 | <0.005 | 0.002 |
| 15 | HUSON | 30 | 0315 | 3170. | 4.0 | 3.5 | 0.4 | 0.03 | <0.01 | 0.1 | 0.012 | 0.02 | 129 | 0.04 | <0.01 | <0.005 | 0.02 | <0.005 | 0.002 |
| 16 | 9-MILE | 30 | 0700 | | 4.5 | 3.3 | 1.7 | 0.03 | <0.01 | 0.1 | 0.018 | 0.01 | 129 | 0.04 | <0.01 | <0.005 | 0.02 | <0.005 | 0.002 |
| 17 | ABV ALBERT | 30 | 0900 | | 4.5 | 2.5 | 1.4 | 0.03 | 0.07 | 0.1 | 0.016 | 0.01 | 125 | 0.04 | <0.01 | <0.005 | 0.01 | <0.005 | 0.002 |
| 18 | TARKIO | 30 | 2100 | | 5.0 | 3.0 | 1.6 | 0.02 | 0.01 | 0.1 | 0.016 | 0.02 | 123 | 0.03 | <0.01 | <0.005 | 0.01 | <0.005 | 0.002 |
| 19 | LOZEAU | 30 | 2320 | | 5.0 | 2.5 | 1.5 | 0.02 | 0.01 | 0.1 | 0.012 | 0.01 | 124 | 0.03 | <0.01 | <0.005 | 0.005 | <0.005 | 0.002 |
| 20 | SUPERIOR | 31 | 0700 | | 4.0 | 2.7 | 1.5 | 0.02 | 0.01 | 0.1 | 0.012 | 0.02 | 123 | 0.03 | <0.01 | <0.005 | 0.005 | <0.005 | 0.002 |
| 21 | BEL ST REG | 31 | 1100 | 3770. | 4.0 | 1.8 | 0.6 | 0.01 | 0.02 | 0.1 | 0.010 | 0.05 | 120 | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | 0.002 |
| 22 | ABV FLATHD | 31 | 2245 | 3770. | 4.0 | 1.8 | 0.6 | 0.01 | 0.01 | 0.1 | 0.005 | 0.02 | 115 | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | 0.002 |
| 23 | FLATHEAD R | 01 | 1245 | 7730. | 5.0 | | | 0.03 | 0.01 | 0.1 | 0.003 | <0.01 | 89 | 0.04 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 24 | PLAINS | 01 | 0001 | 11500. | 4.5 | 1.9 | 1.3 | 0.02 | 0.01 | 0.1 | <0.003 | 0.01 | 97 | 0.06 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 25 | ABV T FALL | 31 | 1500 | 11500. | 5.0 | 1.3 | 0.4 | 0.02 | <0.01 | 0.1 | <0.003 | <0.01 | 98 | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 26 | IN T FALLS | 31 | 1630 | | 5.5 | 1.0 | 0.4 | 0.01 | 0.01 | 0.1 | <0.003 | <0.01 | 121 | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 27 | BEL T FALL | 01 | 0915 | 11846. | 4.0 | 1.0 | 0.4 | 0.01 | 0.01 | 0.1 | <0.003 | <0.01 | 98 | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 28 | IN NOXON | 01 | 1145 | | 6.5 | 1.4 | 1.0 | 0.01 | 0.02 | 0.1 | <0.003 | <0.01 | 94 | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 29 | BEL NOXON | 01 | 1345 | 7230. | 7.5 | 0.7 | 0.3 | 0.03 | 0.02 | 0.1 | <0.003 | <0.01 | 95 | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 30 | IN CAB GOR | 01 | 1500 | | 7.5 | 1.1 | 0.9 | 0.02 | 0.01 | 0.1 | <0.003 | <0.01 | 95 | 0.02 | <0.01 | <0.005 | 0.007 | <0.005 | 0.001 |
| 31 | BEL CAB GO | 01 | 1530 | 9190. | 8.0 | 0.9 | 0.9 | 0.03 | 0.01 | 0.1 | <0.003 | <0.01 | 96 | 0.02 | <0.01 | <0.005 | 0.005 | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON OCT 29-NOV 1,1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 29 | 1030 | 8.40 | 8.25 | 386 | 12.0 | <2.0 | 5.3 | | | | | | | |
| 02 BLACKFOOT | 29 | 1140 | 8.50 | 8.32 | 273 | 12.40 | <2.0 | <5.0 | | | | | | | |
| 03 IN MILLTWN | 29 | 1220 | 8.35 | 8.11 | 386 | 11.1 | <2.0 | 5.4 | | | | | | | |
| 04 BEL MILLTN | 29 | 1320 | 8.40 | 8.23 | 343 | 12.00 | <2.0 | <5.0 | | | | | | | |
| 05 ABV MSLA | 29 | 1510 | 8.60 | 8.28 | 344 | 12.40 | <2.0 | 8.8 | | | | | | | |
| 06 ABV STP | 29 | 1700 | 8.75 | 8.37 | 339 | 12.30 | <2.0 | <5.0 | | | | | | | |
| 07 STP EFFLNT | 29 | 1710 | 7.55 | 6.91 | 738 | 5.50 | 55.7 | 107. | | | | | | | |
| 08 BEL STP | 29 | 1720 | 8.20 | 7.25 | 388 | 11.45 | 10.5 | 21.6 | | | | | | | |
| 09 SHUFFIELDS | 29 | 1800 | 8.75 | 8.25 | 343 | 12.10 | <2.0 | <5.0 | | | | | | | |
| 10 BITTERROOT | 29 | 1845 | 8.40 | 8.07 | 146 | 12.05 | <2.0 | <5.0 | | | | | | | |
| 11 HARPER BR | 29 | 2030 | 8.40 | 8.19 | 271 | 11.70 | <2.0 | <5.0 | 3.6 | 3.6 | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 29 | 2345 | 8.40 | 7.39 | 2693 | | 65.5 | 795. | 1640. | 1500. | | | | | |
| 13 MARCURE | 30 | 0015 | 8.55 | 8.06 | 307 | 11.30 | <2.0 | 8.2 | 17.0 | 16.5 | | | | | |
| 14 FRENCHTOWN | 30 | 0145 | 8.60 | 8.05 | 289 | 11.20 | <2.0 | 5.8 | 9.7 | 9.3 | | | | | |
| 15 HUSON | 30 | 0315 | 8.60 | 8.09 | 283 | 11.35 | <2.0 | <5.0 | 8.5 | 8.4 | | | | | |
| 16 9-MILE | 30 | 0700 | 8.35 | 8.09 | 279 | 11.05 | <2.0 | 5.7 | | | | | | | |
| 17 ABV ALBERT | 30 | 0900 | 8.35 | 8.10 | 277 | 11.70 | <2.0 | 5.3 | | | | | | | |
| 18 TARKIO | 30 | 2100 | 8.50 | 8.22 | 273 | 12.05 | 2.6 | 5.4 | | | | | | | |
| 19 LOZEAU | 30 | 2320 | 8.40 | 8.18 | 272 | 11.75 | <2.0 | <5.0 | | | | | | | |
| 20 SUPERIOR | 31 | 0700 | 8.35 | 8.13 | 270 | 11.50 | <2.0 | 6.6 | | | | | | | |
| 21 BEL ST REG | 31 | 1100 | 8.40 | 8.21 | 263 | 12.45 | <2.0 | <5.0 | | | | | | | |
| 22 ABV FLATHD | 31 | 2245 | 8.10 | 8.17 | 264 | 11.90 | <2.0 | <5.0 | | | | | | | |
| 23 FLATHEAD R | 01 | 1245 | 8.55 | 8.32 | 175 | 12.70 | <2.0 | <5.0 | | | | | | | |
| 24 PLAINS | 01 | 0001 | 8.20 | 8.18 | 207 | 11.90 | <2.0 | <5.0 | | | | | | | |
| 25 ABV T FALL | 31 | 1500 | 8.55 | 8.29 | 206 | 12.40 | <2.0 | <5.0 | | | | | | | |
| 26 IN T FALLS | 31 | 1630 | 8.40 | 8.25 | 201 | 11.90 | <2.0 | <5.0 | | | | | | | |
| 27 BEL T FALL | 01 | 0915 | 8.35 | 8.24 | 205 | 12.35 | <2.0 | <5.0 | | | | | | | |
| 28 IN NOXON | 01 | 1145 | 8.35 | 8.17 | 198 | 11.20 | <2.0 | <5.0 | | | | | | | |
| 29 BEL NOXON | 01 | 1345 | 8.35 | 8.15 | 196 | 10.90 | <2.0 | <5.0 | | | | | | | |
| 30 IN CAB GOR | 01 | 1500 | 8.40 | 8.14 | 196 | 10.75 | <2.0 | <5.0 | | | | | | | |
| 31 BEL CAB GO | 01 | 1530 | 8.20 | 8.11 | 194 | 10.50 | <2.0 | 5.0 | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON DEC 10-12, 1984

| | STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 10 | 1315 | 955. | 0.0 | 20.8 | 4.3 | 0.18 | 0.01 | 0.3 | 0.018 | 0.045 | | 0.26 | 0.01 | 0.03 | 0.06 | <0.005 | 0.006 |
| 02 | BLACKFOOT | 10 | 1400 | 600. | 0.0 | 2.3 | 1.5 | 0.03 | 0.01 | 0.1 | <0.003 | 0.007 | | 0.05 | <0.01 | 0.005 | <0.005 | <0.005 | 0.001 |
| 03 | IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 | BEL MILLTN | 10 | 1500 | 1860. | 0.0 | 5.6 | 1.8 | 0.10 | 0.03 | 0.2 | 0.01 | 0.016 | | 0.12 | <0.01 | 0.016 | 0.07 | <0.005 | 0.004 |
| 05 | ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 | ABV STP | 11 | 0830 | 1860. | 0.0 | 3.1 | 1.4 | 0.11 | 0.02 | 0.2 | 0.007 | 0.013 | | 0.10 | <0.01 | 0.017 | 0.06 | <0.005 | 0.004 |
| 07 | STP EFFLNT | 11 | 0900 | 11.45 | 13.0 | 31.9 | 31.8 | 5.20 | 9.2 | 13.0 | 4.84 | 6.2 | | 0.09 | 0.03 | 0.076 | 0.006 | <0.005 | 0.002 |
| 08 | BEL STP | | | | | | | | | | | | | | | | | | |
| 09 | SHUFFIELDS | 11 | 0945 | 1870. | 0.0 | 3.7 | 1.8 | 0.13 | 0.05 | 0.3 | 0.030 | 0.037 | | 0.11 | 0.01 | 0.012 | 0.06 | <0.005 | 0.004 |
| 10 | BITTERROOT | 10 | 1630 | 980. | 1.0 | 2.7 | 1.9 | 0.07 | 0.01 | 0.3 | <0.003 | 0.009 | | 0.06 | <0.01 | <0.005 | 0.01 | <0.005 | <0.001 |
| 11 | HARPER BR | 11 | 1030 | 2850. | 0.0 | 4.0 | 2.0 | 0.12 | 0.02 | 0.3 | 0.013 | 0.020 | | 0.08 | <0.01 | 0.012 | 0.03 | <0.005 | 0.002 |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 11 | 1130 | 4.70 | 1.0 | 72.6 | 72.6 | 0.02 | 8.6 | 16.9 | 3.14 | 4.2 | | 0.48 | <0.01 | 0.043 | 0.92 | <0.005 | 0.004 |
| 13 | MARCURE | | | | | | | | | | | | | | | | | | |
| 14 | FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 | HUSON | 11 | 1300 | 2855. | 0.0 | 4.6 | 2.2 | 0.12 | 0.03 | 0.3 | 0.023 | 0.032 | | 0.09 | <0.01 | 0.007 | 0.04 | <0.005 | 0.003 |
| 16 | 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 | ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | | | | | | | | |
| 19 | LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 | SUPERIOR | 11 | 1445 | | 0.0 | 2.7 | 1.9 | 0.08 | 0.01 | 0.2 | 0.012 | 0.022 | | 0.06 | <0.01 | <0.005 | 0.02 | <0.005 | 0.002 |
| 21 | BEL ST REG | 11 | 1600 | 3550. | 0.0 | 2.3 | 1.7 | 0.06 | 0.01 | 0.2 | 0.008 | 0.015 | | 0.05 | <0.01 | <0.005 | 0.01 | <0.005 | 0.002 |
| 22 | ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 | FLATHEAD R | 11 | 1715 | 10250. | 0.0 | 1.7 | 1.3 | 0.03 | 0.01 | 0.1 | <0.003 | 0.003 | | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 24 | PLAINS | | | | | | | | | | | | | | | | | | |
| 25 | ABV T FALL | 12 | 1430 | 13800. | 0.0 | 1.6 | 1.6 | 0.03 | <0.01 | 0.2 | <0.003 | 0.005 | | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 26 | IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 | BEL T FALL | 12 | 0830 | 14761. | 0.0 | 0.8 | 0.8 | 0.02 | <0.01 | 0.1 | <0.003 | 0.003 | | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | 0.008 |
| 28 | IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 | BEL NOXON | 12 | 1000 | 15000. | 1.0 | 1.3 | 1.3 | 0.02 | 0.01 | 0.2 | <0.003 | 0.003 | | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 30 | IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 | BEL CAB GO | 12 | 1130 | 16700. | 1.7 | 1.0 | 1.0 | 0.02 | <0.01 | 0.2 | <0.003 | 0.003 | | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON DEC 10-12, 1984

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 10 | 1315 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 10 | 1400 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 10 | 1500 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 11 | 0830 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 11 | 0900 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 11 | 0945 | | | | | | | | | | | | | |
| 10 BITTERROOT | 10 | 1630 | | | | | | | | | | | | | |
| 11 HARPER BR | 11 | 1030 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 11 | 1130 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 11 | 1300 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | 11 | 1445 | | | | | | | | | | | | | |
| 21 BEL ST REG | 11 | 1600 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 11 | 1715 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 12 | 1430 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 12 | 0830 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 12 | 1000 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 12 | 1130 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JAN 14-15, 1985

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 14 | 1015 | 760. | 0.0 | 1.0 | 1.0 | 0.20 | 0.02 | 0.1 | 0.017 | 0.016 | | 0.03 | <0.01 | 0.011 | 0.009 | <0.005 | 0.008 |
| 02 BLACKFOOT | 14 | 1100 | 480. | 0.0 | 0.4 | 0.4 | 0.05 | 0.03 | 0.1 | 0.003 | 0.003 | | 0.01 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 14 | 1200 | 1400. | 0.0 | 1.1 | 1.0 | 0.14 | 0.03 | 0.1 | 0.011 | 0.010 | | 0.03 | <0.01 | 0.011 | 0.02 | <0.005 | 0.006 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 14 | 1230 | 1400. | 0.0 | 0.7 | 0.7 | 0.15 | 0.03 | 0.1 | 0.010 | 0.009 | | 0.02 | <0.01 | 0.010 | 0.008 | <0.005 | 0.007 |
| 07 STP EFFLNT | 14 | 1300 | 12.38 | 11.0 | 27.5 | 27.5 | 9.5 | 4.14 | 7.5 | 5.09 | 5.98 | | 0.04 | 0.02 | 0.051 | 0.005 | <0.005 | 0.003 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 14 | 1430 | 1410. | 0.0 | 1.2 | 1.2 | 0.25 | 0.06 | 0.1 | 0.065 | 0.060 | | 0.02 | <0.01 | 0.011 | 0.009 | <0.005 | 0.007 |
| 10 BITTERROOT | 14 | 1340 | 250. | 0.0 | 2.2 | 1.6 | 0.16 | 0.04 | 0.1 | 0.008 | 0.011 | | 0.06 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |
| 11 HARPER BR | 14 | 1515 | 1660. | 0.0 | 2.5 | 1.6 | 0.20 | 0.03 | 0.1 | 0.020 | 0.022 | | 0.04 | <0.01 | 0.010 | 0.013 | <0.005 | 0.004 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 14 | 1600 | 0. | 0.0 | 99.8 | 99.8 | 0.02 | 6.73 | 19.6 | 2.84 | 4.12 | | 0.50 | <0.01 | 0.046 | 0.78 | <0.005 | 0.001 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 14 | 1645 | 1660. | 0.0 | 1.8 | 1.5 | 0.20 | 0.03 | 0.1 | 0.026 | 0.023 | | 0.04 | <0.01 | 0.006 | 0.04 | <0.005 | 0.004 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 15 | 0945 | 2430. | 0.0 | 1.1 | 1.1 | 0.10 | 0.03 | 0.1 | 0.013 | 0.009 | | 0.02 | <0.01 | <0.005 | 0.006 | <0.005 | 0.004 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 15 | 1100 | 10870. | 0.0 | 1.3 | 1.0 | 0.03 | 0.02 | 0.1 | 0.002 | 0.013 | | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 15 | 1215 | 13300. | 0.0 | 0.8 | 0.8 | 0.03 | 0.02 | 0.1 | <0.001 | <0.001 | | 0.01 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 15 | 1320 | 14141. | 0.0 | 0.8 | 0.8 | 0.03 | 0.02 | 0.1 | 0.005 | 0.001 | | <0.01 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 15 | 1545 | 14600. | 0.0 | 0.2 | 0.2 | 0.04 | 0.03 | 0.1 | 0.001 | <0.001 | | 0.01 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 15 | 1630 | 16800. | 0.0 | 0.4 | 0.4 | 0.03 | 0.03 | 0.1 | <0.001 | <0.001 | | 0.01 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JAN 14-15, 1985

| | STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 14 | 1015 | | | | | | | | | | | | | |
| 02 | BLACKFOOT | 14 | 1100 | | | | | | | | | | | | | |
| 03 | IN MILLTWN | | | | | | | | | | | | | | | |
| 04 | BEL MILLTN | 14 | 1200 | | | | | | | | | | | | | |
| 05 | ABV MSLA | | | | | | | | | | | | | | | |
| 06 | ABV STP | 14 | 1230 | | | | | | | | | | | | | |
| 07 | STP EFFLNT | 14 | 1300 | | | | | | | | | | | | | |
| 08 | BEL STP | | | | | | | | | | | | | | | |
| 09 | SHUFFIELDS | 14 | 1430 | | | | | | | | | | | | | |
| 10 | BITTERROOT | 14 | 1340 | | | | | | | | | | | | | |
| 11 | HARPER BR | 14 | 1515 | | | | | | | | | | | | | |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 14 | 1600 | | | | | | | | | | | | | |
| 13 | MARCURE | | | | | | | | | | | | | | | |
| 14 | FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 | HUSON | 14 | 1645 | | | | | | | | | | | | | |
| 16 | 9-MILE | | | | | | | | | | | | | | | |
| 17 | ABV ALBERT | | | | | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | | | | | |
| 19 | LOZEAU | | | | | | | | | | | | | | | |
| 20 | SUPERIOR | | | | | | | | | | | | | | | |
| 21 | BEL ST REG | 15 | 0945 | | | | | | | | | | | | | |
| 22 | ABV FLATHD | | | | | | | | | | | | | | | |
| 23 | FLATHEAD R | 15 | 1100 | | | | | | | | | | | | | |
| 24 | PLAINS | | | | | | | | | | | | | | | |
| 25 | ABV T FALL | 15 | 1215 | | | | | | | | | | | | | |
| 26 | IN T FALLS | | | | | | | | | | | | | | | |
| 27 | BEL T FALL | 15 | 1320 | | | | | | | | | | | | | |
| 28 | IN NOXON | | | | | | | | | | | | | | | |
| 29 | BEL NOXON | 15 | 1545 | | | | | | | | | | | | | |
| 30 | IN CAB GOR | | | | | | | | | | | | | | | |
| 31 | BEL CAB GO | 15 | 1630 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON FEB 13-14, 1985

| | STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 13 | 1015 | 707. | 0.0 | 7.8 | 2.3 | 0.28 | <0.01 | 0.2 | 0.023 | 0.033 | | 0.11 | 0.01 | 0.024 | 0.03 | <0.005 | 0.007 |
| 02 | BLACKFOOT | 13 | 1100 | 580. | 0.0 | 1.5 | 1.1 | 0.06 | <0.01 | 0.2 | 0.003 | 0.005 | | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| 03 | IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 | BEL MILLTN | 13 | 1200 | 1740. | 0.0 | 4.0 | 1.3 | 0.18 | 0.02 | 0.2 | 0.015 | 0.023 | | 0.08 | <0.01 | 0.016 | 0.02 | <0.005 | 0.005 |
| 05 | ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 | ABV STP | 13 | 1240 | 1740. | 0.0 | 3.6 | 1.3 | 0.18 | 0.01 | 0.2 | 0.011 | 0.018 | | 0.06 | <0.01 | 0.013 | 0.02 | <0.005 | 0.004 |
| 07 | STP EFFLNT | 13 | 1300 | 11.06 | 11.0 | 13.7 | 13.7 | 1.21 | 10.2 | 14.1 | 2.91 | 3.64 | | 0.12 | 0.02 | 0.111 | 0.01 | <0.005 | 0.002 |
| 08 | BEL STP | | | | | | | | | | | | | | | | | | |
| 09 | SHUFFIELDS | 13 | 1440 | 1750. | 0.0 | 6.0 | 1.8 | 0.18 | 0.10 | 0.3 | 0.036 | 0.045 | | 0.07 | <0.01 | 0.013 | 0.02 | <0.005 | 0.005 |
| 10 | BITTERROOT | 13 | 1345 | 250. | 0.0 | 3.6 | 1.7 | 0.20 | 0.02 | 0.2 | 0.013 | 0.020 | | 0.08 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |
| 11 | HARPER BR | 13 | 1515 | 2000. | 0.0 | 3.8 | 1.4 | 0.22 | 0.04 | 0.3 | 0.025 | 0.033 | | 0.07 | <0.01 | 0.008 | 0.02 | <0.005 | 0.003 |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 13 | 1600 | 0. | 0.0 | 119.0 | 119.0 | <0.01 | 6.68 | 20. | 2.70 | 4.00 | | 0.46 | <0.01 | 0.039 | 0.78 | <0.005 | 0.001 |
| 13 | MARCURE | | | | | | | | | | | | | | | | | | |
| 14 | FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 | HUSON | 13 | 1645 | 2000. | 0.0 | 10.1 | 2.5 | 0.23 | 0.06 | 0.4 | 0.041 | 0.056 | | 0.12 | <0.01 | 0.008 | 0.05 | <0.005 | 0.003 |
| 16 | 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 | ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | | | | | | | | |
| 19 | LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 | SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 | BEL ST REG | 14 | 1000 | 2500. | 0.0 | 1.3 | 1.1 | 0.17 | <0.01 | 0.2 | 0.018 | 0.023 | | 0.02 | <0.01 | <0.005 | 0.006 | <0.005 | 0.003 |
| 22 | ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 | FLATHEAD R | 14 | 1100 | 12900. | 0.0 | 2.6 | 1.1 | 0.03 | <0.01 | 0.1 | <0.001 | 0.002 | | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 24 | PLAINS | | | | | | | | | | | | | | | | | | |
| 25 | ABV T FALL | 14 | 1300 | 15400. | 0.0 | 1.2 | 1.0 | 0.05 | <0.01 | 0.1 | 0.003 | 0.002 | | 0.01 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 26 | IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 | BEL T FALL | 14 | 1400 | 15537. | 0.0 | 0.9 | 0.9 | 0.05 | <0.01 | 0.1 | <0.001 | 0.004 | | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| 28 | IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 | BEL NOXON | 14 | 1530 | 16700. | 0.0 | 0.3 | 0.3 | 0.03 | <0.01 | 0.1 | 0.001 | 0.001 | | 0.02 | <0.01 | 0.005 | 0.006 | <0.005 | <0.001 |
| 30 | IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 | BEL CAB GO | 14 | 1630 | 23500. | 0.0 | 0.4 | 0.4 | 0.02 | <0.01 | 0.1 | <0.001 | 0.001 | | 0.02 | <0.01 | <0.005 | 0.005 | <0.005 | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON FEB 13-14, 1985

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 13 | 1015 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 13 | 1100 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 13 | 1200 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 13 | 1240 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 13 | 1300 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 13 | 1440 | | | | | | | | | | | | | |
| 10 BITTERROOT | 13 | 1345 | | | | | | | | | | | | | |
| 11 HARPER BR | 13 | 1515 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 13 | 1600 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 13 | 1645 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 14 | 1000 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 14 | 1100 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 14 | 1300 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 14 | 1400 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 14 | 1530 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 14 | 1630 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON MARCH 18-21, 1985

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 18 | 0945 | 1120. | 4.0 | 56.4 | 11.1 | 0.23 | 0.03 | 0.8 | 0.102 | 0.15 | 176 | 0.56 | 0.04 | 0.078 | 0.18 | <0.005 | 0.013 |
| 02 BLACKFOOT | 18 | 1115 | 658. | 1.0 | 14.3 | 5.9 | 0.02 | <0.01 | 0.8 | 0.067 | 0.10 | 118 | 0.17 | <0.01 | <0.005 | 0.02 | <0.005 | 0.001 |
| 03 IN MILLTWN | 18 | 1320 | | 5.0 | 15.3 | 4.3 | 0.22 | 0.02 | 0.6 | 0.062 | 0.091 | 175 | 0.19 | 0.01 | 0.029 | 0.10 | <0.005 | 0.007 |
| 04 BEL MILLTN | 18 | 1230 | 1790. | 4.0 | 12.5 | 5.1 | 0.13 | 0.02 | 0.5 | 0.051 | 0.080 | 152 | 0.23 | 0.01 | 0.025 | 0.06 | <0.005 | 0.006 |
| 05 ABV MSLA | 18 | 1430 | 1790. | 5.0 | 15.8 | 5.6 | 0.12 | 0.02 | 0.5 | 0.050 | 0.080 | 153 | 0.15 | <0.01 | 0.019 | 0.05 | <0.005 | 0.006 |
| 06 ABV STP | 18 | 1620 | 1790. | 5.5 | 17.6 | 4.5 | 0.10 | <0.01 | 0.6 | 0.049 | 0.080 | 152 | 0.16 | <0.01 | 0.110 | 0.05 | <0.005 | 0.006 |
| 07 STP EFFLNT | 18 | 1630 | 9.59 | 13.0 | 12.3 | 12.3 | 9.77 | 13.0 | 17.5 | 7.223 | 8.23 | 173 | 0.09 | <0.01 | 0.056 | 0.01 | <0.005 | 0.002 |
| 08 BEL STP | 18 | 1645 | 1800. | 6.3 | 15.7 | 4.3 | 1.14 | 1.21 | 2.2 | 0.796 | 0.91 | 154 | 0.22 | 0.02 | 0.031 | 0.06 | <0.005 | 0.005 |
| 09 SHUFFIELDS | 18 | 1715 | 1800. | 5.4 | 17.1 | 4.7 | 0.15 | 0.06 | 0.7 | 0.081 | 0.124 | 153 | 0.20 | 0.01 | 0.024 | 0.06 | <0.005 | 0.006 |
| 10 BITTERROOT | 18 | 1830 | 880. | 8.0 | 12.8 | 3.2 | 0.10 | <0.01 | 0.5 | 0.020 | 0.038 | 63 | 0.08 | <0.01 | <0.005 | 0.02 | <0.005 | <0.001 |
| 11 HARPER BR | 18 | 2150 | 2680. | 7.0 | 21.0 | 4.8 | 0.16 | 0.01 | 0.7 | 0.053 | 0.088 | 126 | 0.11 | <0.01 | 0.011 | 0.03 | <0.005 | 0.004 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 18 | 2315 | 2.76 | 2.5 | 86.5 | 86.5 | <0.01 | 8.22 | 16.8 | 3.16 | 3.90 | 200 | 0.44 | <0.01 | 0.033 | 1.12 | <0.005 | 0.001 |
| 13 MARCURE | 18 | 2345 | 2685. | 6.3 | 19.9 | 5.5 | 0.15 | 0.04 | 0.8 | 0.067 | 0.103 | 131 | 0.23 | 0.01 | 0.016 | 0.12 | <0.005 | 0.005 |
| 14 FRENCHTOWN | 19 | 0100 | 2685. | 6.2 | 19.7 | 5.4 | 0.15 | 0.03 | 0.6 | 0.061 | 0.092 | 129 | 0.18 | <0.01 | 0.014 | 0.08 | <0.005 | 0.004 |
| 15 HUSON | 19 | 0330 | 2685. | 5.8 | 22.4 | 5.5 | 0.15 | 0.02 | 0.7 | 0.058 | 0.097 | 130 | 0.23 | 0.01 | 0.020 | 0.09 | <0.005 | 0.004 |
| 16 9-MILE | 19 | 0700 | | 5.2 | 23.5 | 5.1 | 0.14 | 0.02 | 0.7 | 0.054 | 0.093 | 129 | 0.22 | <0.01 | 0.020 | 0.09 | <0.005 | 0.004 |
| 17 ABV ALBERT | 19 | 0900 | | 5.4 | 23.8 | 5.7 | 0.16 | 0.01 | 0.6 | 0.053 | 0.093 | 128 | 0.24 | 0.01 | 0.020 | 0.09 | <0.005 | 0.004 |
| 18 TARKIO | 19 | 2030 | | 6.9 | 20.0 | 5.2 | 0.12 | 0.01 | 0.6 | 0.049 | 0.110 | 122 | 0.20 | 0.01 | 0.024 | 0.07 | <0.005 | 0.004 |
| 19 LOZIAU | 19 | 1115 | | 6.0 | 19.8 | 5.2 | 0.12 | 0.01 | 0.6 | 0.046 | 0.083 | 123 | 0.19 | <0.01 | 0.012 | 0.07 | <0.005 | 0.004 |
| 20 SUPERIOR | 20 | 0615 | | 5.8 | 20.1 | 5.2 | 0.11 | 0.02 | 0.6 | 0.044 | 0.079 | 122 | 0.19 | <0.01 | 0.019 | 0.07 | <0.005 | 0.003 |
| 21 BEL ST REG | 20 | 0915 | 3680. | 5.8 | 17.9 | 5.5 | 0.05 | <0.01 | 0.4 | 0.028 | 0.060 | 118 | 0.13 | <0.01 | 0.019 | 0.05 | <0.005 | 0.003 |
| 22 ABV FLATHD | 20 | 2200 | 3680. | 6.5 | 15.6 | 4.3 | 0.03 | <0.01 | 0.3 | 0.024 | 0.059 | 118 | 0.11 | <0.01 | 0.01 | 0.05 | <0.005 | 0.003 |
| 23 FLATHEAD R | 20 | 1130 | 7320. | 6.0 | 20.4 | 2.4 | 0.01 | <0.01 | 0.1 | 0.006 | 0.023 | 91 | 0.10 | <0.01 | <0.005 | 0.01 | <0.005 | <0.001 |
| 24 PLAINS | 20 | 2300 | 11000. | 6.0 | 14.9 | 2.8 | 0.02 | <0.01 | 0.1 | 0.010 | 0.030 | 101 | 0.13 | <0.01 | <0.005 | 0.02 | <0.005 | 0.001 |
| 25 ABV T FALL | 20 | 1330 | 11000. | 6.6 | 10.2 | 2.3 | <0.01 | <0.01 | 0.3 | 0.007 | 0.024 | 101 | 0.12 | <0.01 | 0.006 | 0.02 | <0.005 | 0.001 |
| 26 IN T FALLS | 20 | 1445 | | 6.1 | 6.9 | 1.6 | <0.01 | <0.01 | 0.2 | 0.005 | 0.022 | 100 | 0.12 | <0.01 | 0.027 | 0.02 | <0.005 | 0.001 |
| 27 BEL T FALL | 20 | 1515 | 11200. | 6.3 | 7.1 | 2.7 | <0.01 | <0.01 | 0.1 | 0.005 | 0.021 | 100 | 0.09 | <0.01 | <0.005 | 0.02 | <0.005 | 0.001 |
| 28 IN NOXON | 21 | 1330 | | 5.7 | 11.3 | 2.0 | 0.04 | 0.01 | 0.1 | 0.006 | 0.020 | 106 | 0.14 | <0.01 | <0.005 | 0.01 | <0.005 | 0.001 |
| 29 BEL NOXON | 21 | 1000 | 15700. | 3.5 | 2.3 | 1.4 | 0.04 | <0.01 | 0.1 | 0.002 | 0.014 | 100 | 0.07 | <0.01 | 0.009 | 0.02 | <0.005 | 0.001 |
| 30 IN CAB GOR | 21 | 1145 | | 3.4 | 1.9 | 1.4 | 0.04 | <0.01 | 0.1 | 0.002 | 0.013 | 98 | 0.07 | <0.01 | 0.123 | 0.02 | <0.005 | 0.001 |
| 31 BEL CAB GO | 21 | 1230 | 18900. | 3.5 | 2.5 | 1.0 | 0.04 | <0.01 | 0.1 | <0.001 | 0.012 | 98 | 0.05 | <0.01 | <0.005 | 0.01 | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON MARCH 18-21, 1985

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 18 | 0945 | 8.05 | 8.05 | 386 | 11.95 | 3.6 | 15.2 | | | | 0.047 | 0.0885 | 0.0008 | 0.005 |
| 02 BLACKFOOT | 18 | 1115 | 8.20 | 8.18 | 249 | 13.35 | 3.1 | 13.4 | | | | 0.002 | 0.0098 | 0.0001 | <0.001 |
| 03 IN MILLTWN | 18 | 1320 | 7.95 | 8.08 | 383 | 11.10 | <2.0 | 12.4 | | | | | | | |
| 04 BEL MILLTN | 18 | 1230 | 8.15 | 8.22 | 330 | 12.40 | 2.2 | 9.1 | | | | 0.015 | 0.0274 | 0.0002 | 0.003 |
| 05 ABV MSLA | 18 | 1430 | 8.40 | 8.36 | 333 | 12.95 | 2.5 | 9.6 | | | | | | | |
| 06 ABV STP | 18 | 1620 | 8.35 | 8.44 | 328 | 13.25 | 2.6 | 13.6 | | | | 0.020 | 0.0334 | 0.0004 | 0.003 |
| 07 STP EFFLNT | 18 | 1630 | 7.20 | 7.12 | 764 | 6.50 | 13.8 | 51.6 | | | | 0.017 | 0.0679 | 0.0004 | 0.003 |
| 08 BEL STP | 18 | 1645 | 8.10 | 7.91 | 384 | 12.55 | 3.7 | 15.2 | | | | | | | |
| 09 SHUFFIELDS | 18 | 1715 | 8.40 | 8.40 | 328 | 13.10 | 2.5 | 11.8 | | | | 0.018 | 0.0347 | 0.0011 | 0.004 |
| 10 BITTERROOT | 18 | 1830 | 8.05 | 8.12 | 148 | 11.70 | <2.0 | 5.6 | | | | 0.003 | 0.0091 | 0.0002 | 0.014 |
| 11 HARPER BR | 18 | 2150 | 8.45 | 8.33 | 275 | 11.50 | <2.0 | 12.0 | 18. | 17. | | 0.011 | 0.0275 | 0.0009 | 0.008 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 18 | 2315 | 8.40 | 7.90 | 2991 | | 67.5 | 755. | 798. | 835. | | 0.012 | 0.0618 | 0.0032 | 0.017 |
| 13 MARCURE | 18 | 2345 | 8.35 | 8.13 | 322 | 10.95 | 2.5 | 15.3 | 29. | 28. | | | | | |
| 14 FRENCHTOWN | 19 | 0100 | 8.05 | 8.18 | 296 | 10.65 | 2.5 | 11.0 | 23. | 22. | | | | | |
| 15 HUSON | 19 | 0330 | 8.05 | 8.17 | 293 | 10.80 | 2.5 | 11.5 | 21. | 20. | | 0.028 | 0.0574 | 0.0043 | 0.043 |
| 16 9-MILE | 19 | 0700 | 8.00 | 8.13 | 292 | 10.65 | 2.9 | 13.3 | | | | | | | |
| 17 ABV ALBERT | 19 | 0900 | 8.15 | 8.19 | 290 | 11.20 | 2.7 | 15.3 | | | | | | | |
| 18 TARKIO | 19 | 2030 | 8.00 | 8.20 | 284 | 11.45 | 2.4 | 11.4 | | | | | | | |
| 19 LOZEAU | 19 | 1115 | 8.25 | 8.13 | 284 | 11.05 | 3.6 | 8.0 | | | | | | | |
| 20 SUPERIOR | 20 | 0615 | 7.95 | 8.05 | 279 | 10.65 | 2.6 | 9.6 | | | | | | | |
| 21 BEL ST REG | 20 | 0915 | 8.20 | 8.09 | 270 | 11.75 | 3.0 | 7.7 | | | | 0.007 | 0.017[illegible] | 0.0001 | 0.002 |
| 22 ABV FLATHD | 20 | 2200 | 8.20 | 8.24 | 270 | 11.70 | 2.7 | 11.3 | | | | | | | |
| 23 FLATHEAD R | 20 | 1130 | 8.60 | 8.33 | 184 | 12.35 | <2.0 | <5.0 | | | | 0.003 | [illegible] | 0.0001 | 0.003 |
| 24 PLAINS | 20 | 2300 | 8.35 | 8.33 | 213 | 11.90 | 2.2 | <5.0 | | | | | | | |
| 25 ABV T FALL | 20 | 1330 | 8.25 | 8.26 | 213 | 12.55 | <2.0 | <5.0 | | | | 0.002 | [illegible] | 0.0001 | 0.002 |
| 26 IN T FALLS | 20 | 1445 | 8.40 | 8.46 | 216 | 12.20 | <2.0 | <5.0 | | | | | | | |
| 27 BEL T FALL | 20 | 1515 | 8.70 | 8.49 | 211 | 12.35 | <2.0 | <5.0 | | | | 0.002 | [illegible] | 0.0006 | 0.004 |
| 28 IN NOXON | 21 | 1330 | 8.05 | 8.28 | 221 | 12.00 | <2.0 | <5.0 | | | | | | | |
| 29 BEL NOXON | 21 | 1000 | 8.00 | 8.21 | 207 | 12.20 | <2.0 | <5.0 | | | | 0.002 | [illegible] | 0.0001 | 0.004 |
| 30 IN CAB GOR | 21 | 1145 | 8.05 | 8.17 | 206 | 12.25 | <2.0 | <5.0 | | | | | | | |
| 31 BEL CAB GO | 21 | 1230 | 8.10 | 8.27 | 205 | 12.85 | <2.0 | <5.0 | | | | 0.001 | [illegible] | 0.0004 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS) A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON APRIL 10, 1985

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 10 | 0800 | 1407. | 7.0 | 44.0 | 6.9 | 0.14 | <0.01 | 0.3 | 0.059 | 0.091 | 167 | | | | | | 0.010 |
| 02 BLACKFOOT | 10 | 0845 | 1020. | 6.0 | 14.8 | 3.1 | 0.02 | <0.01 | 0.1 | 0.013 | 0.037 | 112 | | | | | | 0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 10 | 0930 | 2380. | 8.0 | 16.8 | 2.9 | 0.08 | <0.01 | 0.1 | 0.030 | 0.049 | 142 | | | | | | 0.005 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 10 | 1015 | 2380. | 8.6 | 18.2 | 3.0 | 0.07 | <0.01 | 0.01 | 0.030 | 0.031 | 138 | | | | | | 0.005 |
| 07 STP EFFLNT | 10 | 1030 | 11.68 | 13.0 | 8.9 | 8.9 | 2.47 | 7.56 | 9.4 | 3.57 | 3.93 | 172 | | | | | | 0.002 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 10 | 1200 | 2390. | 9.2 | 15.1 | 2.6 | 0.08 | 0.03 | 0.2 | 0.046 | 0.070 | 142 | | | | | | 0.005 |
| 10 BITTERROOT | 10 | 1115 | 1690. | 9.0 | 33.7 | 5.4 | 0.04 | <0.01 | 0.1 | 0.021 | 0.054 | 47 | | | | | | <0.001 |
| 11 HARPER BR | 10 | 1230 | 4080. | 9.6 | 27.1 | 3.9 | 0.07 | <0.01 | 0.2 | 0.032 | 0.063 | 110 | | | | | | 0.004 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 10 | 1300 | 6.79 | 8.2 | 52.7 | 52.7 | 0.81 | 5.82 | 15.3 | 2.20 | 2.85 | 170 | | | | | | 0.001 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 10 | 1345 | 4090. | 10.5 | 25.2 | 4.2 | 0.052 | <0.01 | 0.1 | 0.026 | 0.065 | 110 | | | | | | 0.003 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 10 | 1530 | 5750. | 10.0 | 19.3 | 3.4 | 0.056 | <0.01 | 0.2 | 0.030 | 0.052 | 89 | | | | | | 0.003 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 10 | 1615 | 5950. | 9.5 | 2.9 | 1.1 | 0.02 | <0.01 | 0.1 | <0.001 | 0.008 | 84 | | | | | | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 10 | 1715 | 11700. | 10.6 | 7.7 | 2.0 | 0.02 | <0.01 | 0.1 | 0.009 | 0.024 | 91 | | | | | | 0.002 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 10 | 1800 | 12900. | | 4.8 | 1.5 | 0.02 | <0.01 | 0.1 | 0.008 | 0.024 | 88 | | | | | | 0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 10 | 2000 | 14600. | | 2.5 | 1.2 | 0.02 | <0.01 | 0.1 | 0.003 | 0.012 | 96 | | | | | | 0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 10 | 1900 | 17100. | | 2.5 | 1.1 | 0.03 | <0.01 | 0.1 | 0.002 | 0.013 | 95 | | | | | | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON APRIL 10, 1985

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 10 | 0800 | | | | | | | | | | 0.034 | 0.0652 | 0.0001 | 0.010 |
| 02 BLACKFOOT | 10 | 0845 | | | | | | | | | | 0.002 | 0.0045 | 0.0001 | 0.004 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 10 | 0930 | | | | | | | | | | 0.014 | 0.0299 | 0.0007 | 0.039 |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 10 | 1015 | | | | | | | | | | 0.016 | 0.0281 | 0.0016 | 0.019 |
| 07 STP EFFLNT | 10 | 1030 | | | | | | | | | | 0.022 | 0.0573 | 0.0047 | 0.058 |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 10 | 1200 | | | | | | | | | | 0.012 | 0.0255 | 0.0005 | 0.008 |
| 10 BITTERROOT | 10 | 1115 | | | | | | | | | | 0.002 | 0.0060 | 0.0002 | 0.009 |
| 11 HARPER BR | 10 | 1230 | | | | | | | | | | 0.009 | 0.0232 | 0.0003 | 0.003 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 10 | 1300 | | | | | | | | | | 0.008 | 0.0413 | 0.063 | 0.013 |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 10 | 1345 | | | | | | | | | | 0.010 | 0.0251 | 0.0020 | 0.004 |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 10 | 1530 | | | | | | | | | | 0.008 | 0.0116 | 0.0014 | 0.005 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 10 | 1615 | | | | | | | | | | <0.001 | 0.0069 | 0.0010 | 0.006 |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 10 | 1715 | | | | | | | | | | 0.035 | [illegible] | 0.0019 | 0.004 |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 10 | 1800 | | | | | | | | | | 0.002 | [illegible] | 0.0003 | 0.002 |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 10 | 2000 | | | | | | | | | | <0.001 | 0.0054 | 0.0008 | 0.005 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 10 | 1900 | | | | | | | | | | 0.002 | 0.0083 | 0.0015 | 0.005 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON APRIL 23-24, 1985

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 23 | 0900 | 1701. | 5.0 | 20.0 | 5.2 | 0.05 | <0.01 | 0.4 | 0.029 | 0.048 | 130 | | 0.02 | 0.028 | | <0.005 | 0.007 |
| 02 BLACKFOOT | 23 | 1000 | 2430. | 5.0 | 8.4 | 3.5 | <0.01 | <0.01 | 0.4 | 0.006 | 0.019 | 78 | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 23 | 1100 | 4140. | 5.0 | 12.4 | 4.3 | 0.02 | <0.01 | 0.4 | 0.014 | 0.036 | 98 | | <0.01 | 0.008 | | <0.005 | 0.003 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 23 | 1230 | 4140. | 6.0 | 10.8 | 3.9 | 0.02 | <0.01 | 0.4 | 0.014 | 0.028 | 94 | | <0.01 | 0.012 | | <0.005 | 0.003 |
| 07 STP EFFLNT | 23 | 1300 | 13.07 | 13.4 | 23.9 | 23.7 | 6.85 | 10.8 | 19.8 | 6.35 | 7.30 | 163 | | 0.01 | 0.059 | | <0.005 | 0.001 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 23 | 1330 | 4150. | 6.0 | 11.7 | 3.9 | 0.03 | 0.03 | 0.4 | 0.032 | 0.044 | 95 | | <0.01 | 0.010 | | <0.005 | 0.003 |
| 10 BITTERROOT | 23 | 1200 | 3405. | 6.0 | 8.1 | 3.7 | 0.05 | <0.01 | 0.3 | 0.009 | 0.018 | 32 | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 11 HARPER BR | 23 | 1400 | 7560. | 7.0 | 13.1 | 4.7 | 0.04 | <0.01 | 0.4 | 0.017 | 0.031 | 79 | | <0.01 | 0.008 | | <0.005 | 0.002 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 23 | 1430 | 20.73 | 10.0 | 97.6 | 95.7 | <0.01 | 4.98 | 17.0 | 1.56 | 2.37 | 144 | | <0.01 | 0.047 | | <0.005 | 0.007 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 23 | 1530 | 7590. | 7.3 | 13.5 | 4.2 | 0.04 | 0.02 | 0.4 | 0.023 | 0.041 | 74 | | <0.01 | 0.007 | | <0.005 | 0.002 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 23 | 1700 | 10500. | 7.0 | 15.8 | 4.8 | 0.06 | <0.01 | 0.3 | 0.020 | 0.035 | 66 | | <0.01 | 0.007 | | <0.005 | 0.002 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 23 | 1745 | 8800. | 6.0 | 14.1 | 3.0 | <0.01 | <0.01 | 0.3 | 0.003 | 0.011 | 88 | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 23 | 1845 | 19300. | 7.0 | 10.1 | 3.9 | 0.03 | <0.01 | 0.3 | 0.012 | 0.022 | 76 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 23 | 1930 | 29145. | 7.0 | 9.9 | 3.4 | 0.03 | <0.01 | 0.3 | 0.010 | 0.020 | 73 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 24 | 1130 | 21500. | 8.0 | 5.7 | 1.3 | 0.06 | 0.03 | 0.3 | 0.013 | 0.026 | 62 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 24 | 1015 | 27700. | 9.0 | 4.9 | 1.2 | 0.06 | 0.03 | 0.3 | 0.010 | 0.019 | 63 | | <0.01 | <0.005 | | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

## SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
## RESULTS OF SAMPLES TAKEN ON APRIL 23-24, 1985

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 23 | 0900 | | | | | | | | | | 0.017 | 0.0381 | 0.0007 | 0.003 |
| 02 BLACKFOOT | 23 | 1000 | | | | | | | | | | <0.001 | 0.0095 | 0.0013 | 0.009 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 23 | 1100 | | | | | | | | | | 0.006 | 0.0155 | 0.0008 | 0.006 |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 23 | 1230 | | | | | | | | | | 0.007 | 0.0146 | 0.0004 | 0.003 |
| 07 STP EFFLNT | 23 | 1300 | | | | | | | | | | 0.033 | 0.0890 | 0.0031 | 0.017 |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 23 | 1330 | | | | | | | | | | 0.009 | 0.0261 | 0.0017 | 0.008 |
| 10 BITTERROOT | 23 | 1200 | | | | | | | | | | 0.005 | 0.0134 | 0.0033 | 0.014 |
| 11 HARPER BR | 23 | 1400 | | | | | | | | | | 0.006 | 0.0241 | 0.0028 | 0.016 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 23 | 1430 | | | | | | | | | | <0.001 | 0.0329 | 0.0015 | 0.010 |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 23 | 1530 | | | | | | | | | | 0.004 | 0.0149 | 0.0005 | 0.003 |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 23 | 1700 | | | | | | | | | | 0.002 | 0.0115 | 0.0004 | 0.023 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 23 | 1745 | | | | | | | | | | <0.001 | 0.0[illegible]54 | 0.0002 | 0.005 |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 23 | 1845 | | | | | | | | | | 0.001 | 0.0[illegible]92 | 0.0009 | 0.011 |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 23 | 1930 | | | | | | | | | | 0.003 | 0.0045 | 0.0010 | 0.010 |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 24 | 1130 | | | | | | | | | | <0.001 | 0.0041 | 0.0002 | 0.003 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 24 | 1015 | | | | | | | | | | <0.001 | 0.0050 | 0.0004 | 0.006 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON MAY 8-9, 1985

| | STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 08 | 0915 | 2600. | 9.0 | 29.2 | 7.7 | 0.02 | 0.01 | 0.4 | 0.027 | 0.051 | 131 | | 0.01 | 0.026 | | <0.005 | 0.006 |
| 02 | BLACKFOOT | 08 | 1000 | 4230. | 8.0 | 28.0 | 5.5 | 0.01 | <0.01 | 0.3 | 0.014 | 0.032 | 121 | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 03 | IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 | BEL MILLTN | 08 | 1100 | 6600. | 9.0 | 28.0 | 5.8 | 0.01 | 0.02 | 0.3 | 0.019 | 0.043 | 122 | | <0.01 | 0.008 | | <0.005 | 0.001 |
| 05 | ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 | ABV STP | 08 | 1200 | 6600. | 8.7 | 27.1 | 6.6 | <0.01 | 0.02 | 0.3 | 0.020 | 0.041 | 85 | | <0.01 | 0.011 | | <0.005 | 0.002 |
| 07 | STP EFFLNT | 08 | 1215 | 12.07 | 13.0 | 22.2 | 22.2 | 3.44 | 3.35 | 6.98 | 3.61 | 4.50 | 166 | | 0.01 | 0.066 | | <0.005 | 0.001 |
| 08 | BEL STP | | | | | | | | | | | | | | | | | | |
| 09 | SHUFFIELDS | 08 | 1345 | 6610. | 9.0 | 27.2 | 6.2 | <0.01 | 0.01 | 0.3 | 0.024 | 0.050 | 83 | | <0.01 | 0.012 | | <0.005 | 0.001 |
| 10 | BITTERROOT | 08 | 1300 | 4890. | 8.0 | 13.7 | 4.3 | 0.03 | 0.02 | 0.2 | 0.009 | 0.021 | 25 | | <0.01 | <0.005 | | <0.005 | 0.003 |
| 11 | HARPER BR | 08 | 1415 | 11500. | 9.6 | 22.8 | 5.6 | 0.02 | 0.02 | 0.3 | 0.019 | 0.036 | 68 | | <0.01 | 0.009 | | <0.005 | <0.001 |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 08 | 1500 | 33.93 | 14.0 | 103.5 | 103.5 | <0.01 | 5.10 | 21.0 | 1.30 | 2.96 | 152 | | <0.01 | 0.032 | | <0.005 | 0.002 |
| 13 | MARCURF | | | | | | | | | | | | | | | | | | |
| 14 | FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 | HUSON | 08 | 1645 | 11540. | 10.0 | 26.2 | 6.2 | 0.03 | 0.04 | 0.4 | 0.024 | 0.049 | 61 | | 0.01 | 0.005 | | <0.005 | 0.002 |
| 16 | 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 | ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | | | | | | | | |
| 19 | LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 | SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 | BEL ST REG | 08 | 1820 | 15700. | 9.0 | 27.2 | 5.5 | 0.05 | 0.02 | 0.3 | 0.022 | 0.042 | 59 | | <0.01 | 0.005 | | <0.005 | 0.002 |
| 22 | ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 | FLATHEAD R | 08 | 1915 | 13300. | 8.6 | 6.2 | 2.4 | 0.01 | <0.01 | 0.1 | <0.001 | 0.004 | 88 | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 24 | PLAINS | | | | | | | | | | | | | | | | | | |
| 25 | ABV T FALL | 08 | 2015 | 29000. | 8.8 | 18.1 | 4.8 | 0.03 | 0.02 | 0.2 | 0.012 | 0.026 | 74 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 26 | IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 | BEL T FALL | 09 | 2045 | 30672. | 8.7 | 20.3 | 4.4 | 0.03 | 0.02 | 0.2 | 0.013 | 0.030 | 71 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 28 | IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 | BEL NOXON | 09 | 1645 | 36700. | 10.0 | 5.5 | 1.2 | 0.03 | 0.02 | 0.2 | 0.007 | 0.018 | 61 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 30 | IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 | BEL CAB GO | 09 | 1545 | 40400. | 9.5 | 5.2 | 2.3 | 0.03 | 0.01 | 0.2 | 0.005 | 0.013 | 64 | | <0.01 | <0.005 | | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON MAY 8-9, 1985

| | STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 08 | 0915 | | | | | | | | | | 0.015 | 0.0354 | <0.0001 | 0.003 |
| 02 | BLACKFOOT | 08 | 1000 | | | | | | | | | | <0.001 | 0.0090 | 0.0020 | 0.005 |
| 03 | IN MILLTWN | | | | | | | | | | | | | | | |
| 04 | BEL MILLTN | 08 | 1100 | | | | | | | | | | 0.005 | 0.0261 | 0.0002 | 0.003 |
| 05 | ABV MSLA | | | | | | | | | | | | | | | |
| 06 | ABV STP | 08 | 1200 | | | | | | | | | | 0.006 | 0.0171 | 0.0009 | 0.003 |
| 07 | STP EFFLNT | 08 | 1215 | | | | | | | | | | 0.013 | 0.0813 | 0.0027 | 0.018 |
| 08 | BEL STP | | | | | | | | | | | | | | | |
| 09 | SHUFFIELDS | 08 | 1345 | | | | | | | | | | 0.014 | 0.0613 | 0.0007 | 0.006 |
| 10 | BITTERROOT | 08 | 1300 | | | | | | | | | | <0.001 | 0.0090 | 0.0027 | 0.005 |
| 11 | HARPER BR | 08 | 1415 | | | | | | | | | | 0.012 | 0.0231 | 0.0002 | 0.003 |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 08 | 1500 | | | | | | | | | | <0.001 | 0.0536 | 0.0037 | 0.009 |
| 13 | MARCURE | | | | | | | | | | | | | | | |
| 14 | FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 | HUSON | 08 | 1645 | | | | | | | | | | 0.004 | 0.0180 | 0.0002 | 0.003 |
| 16 | 9-MILE | | | | | | | | | | | | | | | |
| 17 | ABV ALBERT | | | | | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | | | | | |
| 19 | LOZEAU | | | | | | | | | | | | | | | |
| 20 | SUPERIOR | | | | | | | | | | | | | | | |
| 21 | BEL ST REG | 08 | 1820 | | | | | | | | | | 0.008 | 0.0266 | 0.0014 | 0.014 |
| 22 | ABV FLATHD | | | | | | | | | | | | | | | |
| 23 | FLATHEAD R | 08 | 1915 | | | | | | | | | | 0.004 | 0.0135 | 0.0006 | 0.004 |
| 24 | PLAINS | | | | | | | | | | | | | | | |
| 25 | ABV T FALL | 08 | 2015 | | | | | | | | | | 0.001 | 0.0099 | 0.0008 | 0.010 |
| 26 | IN T FALLS | | | | | | | | | | | | | | | |
| 27 | BEL T FALL | 09 | 2045 | | | | | | | | | | 0.001 | 0.0122 | 0.0005 | 0.005 |
| 28 | IN NOXON | | | | | | | | | | | | | | | |
| 29 | BEL NOXON | 09 | 1645 | | | | | | | | | | <0.001 | 0.0054 | 0.0010 | 0.010 |
| 30 | IN CAB GOR | | | | | | | | | | | | | | | |
| 31 | BEL CAB GO | 09 | 1545 | | | | | | | | | | 0.003 | 0.0275 | 0.0096 | 0.051 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON MAY 22-23, 1985

| | STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 22 | 1000 | 2358. | 11.0 | 19.2 | 6.4 | <0.01 | <0.01 | 0.2 | 0.025 | 0.043 | 80 | | | | | | 0.004 |
| 02 | BLACKFOOT | 22 | 1101 | 5350. | 10.0 | 53.3 | 7.5 | <0.01 | <0.01 | 0.4 | 0.025 | 0.046 | 74 | | | | | | <0.001 |
| 03 | IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 | BEL MILLTN | 22 | 1200 | 7440. | 11.5 | 41.5 | 6.8 | <0.01 | <0.01 | 0.3 | 0.023 | 0.043 | 76 | | | | | | 0.002 |
| 05 | ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 | ABV STP | 22 | 1300 | 7440. | 11.5 | 33.6 | 6.8 | <0.01 | <0.01 | 0.3 | 0.021 | 0.037 | 68 | | | | | | 0.002 |
| 07 | STP EFFLNT | 22 | 1330 | 11.76 | 15.0 | 32.6 | 32.6 | 3.47 | 3.74 | 8.7 | 3.73 | 4.67 | 170 | | | | | | 0.001 |
| 08 | BEL STP | | | | | | | | | | | | | | | | | | |
| 09 | SHUFFIELDS | 22 | 1500 | 7450. | 12.3 | 36.2 | 7.2 | <0.01 | 0.01 | 0.4 | 0.028 | 0.034 | 71 | | | | | | 0.002 |
| 10 | BITTERROOT | 22 | 1415 | 8750. | 11.0 | 40.5 | 8.1 | 0.01 | <0.01 | 0.3 | 0.020 | 0.025 | 12 | | | | | | <0.001 |
| 11 | HARPER BP | 22 | 1600 | 16200. | 13.3 | 37.2 | 6.6 | <0.01 | <0.01 | 0.3 | 0.027 | 0.050 | 50 | | | | | | 0.001 |
| 12 | CHAMP OU1 | | | | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 22 | 1700 | 45.19 | 20.4 | 101. | 101. | 0.01 | 4.11 | 22.3 | 1.42 | 4.17 | 170 | | | | | | 0.004 |
| 13 | MARCURE | | | | | | | | | | | | | | | | | | |
| 14 | FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 | HUSON | 22 | 1800 | 16240. | 13.5 | 50.8 | 7.7 | 0.01 | 0.02 | 0.5 | 0.038 | 0.073 | 43 | | | | | | 0.001 |
| 16 | 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 | ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | | | | | | | | |
| 19 | LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 | SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 | BEL ST REG | 22 | 2015 | 23200. | 12.0 | 64.1 | 9.4 | 0.03 | 0.02 | 0.4 | 0.045 | 0.075 | 42 | | | | | | 0.001 |
| 22 | ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 | FLATHEAD R | 22 | 2100 | 11500. | 11.5 | 7.2 | 3.6 | <0.01 | <0.01 | 0.1 | 0.010 | 0.012 | 87 | | | | | | <0.001 |
| 24 | PLAINS | | | | | | | | | | | | | | | | | | |
| 25 | ABV T FALL | 22 | 2140 | 34700. | 13.5 | 39.7 | 6.8 | 0.02 | 0.01 | 0.4 | 0.024 | 0.042 | 58 | | | | | | <0.001 |
| 26 | IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 | BEL T FALL | 22 | 2245 | 38730. | 13.5 | 33.9 | 7.0 | | 0.01 | 0.3 | 0.022 | 0.039 | 56 | | | | | | <0.001 |
| 28 | IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 | BEL NOXON | 23 | 1645 | 30500. | 13.0 | 4.0 | 2.9 | 0.02 | 0.01 | 0.1 | 0.007 | 0.014 | 62 | | | | | | <0.001 |
| 30 | IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 | BEL CAB GO | 23 | 1530 | 33000. | 12.2 | 4.4 | 2.9 | 0.02 | <0.01 | 0.1 | 0.003 | 0.010 | 62 | | | | | | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON MAY 22-23, 1985

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 22 | 1000 | | | | | | | | | | 0.008 | 0.0384 | 0.0006 | 0.002 |
| 02 BLACKFOOT | 22 | 1101 | | | | | | | | | | 0.002 | 0.0146 | 0.0003 | 0.003 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 22 | 1200 | | | | | | | | | | 0.005 | 0.0183 | 0.0008 | 0.002 |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 22 | 1300 | | | | | | | | | | 0.007 | 0.0172 | 0.0003 | 0.003 |
| 07 STP EFFLNT | 22 | 1330 | | | | | | | | | | 0.027 | 0.0872 | 0.0004 | 0.004 |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 22 | 1500 | | | | | | | | | | 0.007 | 0.0439 | 0.0011 | 0.003 |
| 10 BITTERROOT | 22 | 1415 | | | | | | | | | | 0.004 | 0.049 | 0.0005 | 0.006 |
| 11 HARPER BR | 22 | 1600 | | | | | | | | | | 0.011 | 0.0427 | 0.0023 | 0.005 |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 22 | 1700 | | | | | | | | | | 0.005 | 0.0533 | 0.0022 | 0.010 |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 22 | 1800 | | | | | | | | | | 0.007 | 0.0276 | 0.0017 | 0.008 |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 22 | 2015 | | | | | | | | | | 0.010 | 0.0433 | 0.0056 | 0.005 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 22 | 2100 | | | | | | | | | | 0.004 | 0.0140 | 0.0012 | 0.009 |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 22 | 2140 | | | | | | | | | | 0.007 | 0.0244 | 0.0017 | 0.007 |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 22 | 2245 | | | | | | | | | | 0.005 | 0.0197 | 0.0022 | 0.014 |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 23 | 1645 | | | | | | | | | | 0.005 | 0.0138 | 0.0012 | 0.009 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 23 | 1530 | | | | | | | | | | 0.004 | 0.0195 | 0.0010 | 0.006 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JUNE 5-6, 1985

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 05 | 1015 | 2289. | 15.0 | 14.1 | 4.8 | <0.01 | <0.01 | 0.3 | 0.025 | 0.042 | | | <0.01 | 0.016 | | <0.005 | 0.006 |
| 02 BLACKFOOT | 05 | 1100 | 3380. | 9.9 | 12.5 | 3.6 | <0.01 | <0.01 | 0.2 | 0.007 | 0.015 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 05 | 1145 | 5520. | 10.4 | 13.7 | 3.7 | <0.01 | <0.01 | 0.3 | 0.014 | 0.025 | | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 05 | 1215 | 5520. | 10.0 | 13.5 | 3.9 | <0.01 | <0.01 | 0.4 | 0.015 | 0.028 | | | <0.01 | 0.005 | | <0.005 | 0.003 |
| 07 STP EFFLNT | 05 | 1230 | 12.84 | 14.3 | 12.3 | 12.3 | 5.46 | 1.82 | 4.0 | 3.81 | 4.23 | | | <0.01 | 0.063 | | <0.005 | 0.001 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 05 | 1400 | 5530. | 10.5 | 13.4 | 4.2 | <0.01 | <0.01 | 0.3 | 0.019 | 0.034 | | | <0.01 | 0.007 | | <0.005 | 0.003 |
| 10 BITTERROOT | 05 | 1300 | 5965. | 10.9 | 11.5 | 3.7 | 0.03 | <0.01 | 0.2 | 0.008 | 0.019 | | | <0.01 | 0.005 | | <0.005 | <0.001 |
| 11 HARPER BR | 05 | 1445 | 11500. | 11.0 | 11.1 | 3.6 | 0.02 | <0.01 | 0.2 | 0.014 | 0.025 | | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 12 CHAMP 001 | 05 | 1600 | 13.59 | 15.0 | 103.2 | 103.2 | <0.01 | 6.43 | 22.0 | 1.85 | 3.38 | | | <0.01 | 0.038 | | <0.005 | 0.002 |
| 12 CHAMP 003 | 05 | 1530 | 24.95 | 16.0 | 61.7 | 61.7 | <0.01 | 3.79 | 14.1 | 0.64 | 1.89 | | | <0.01 | 0.019 | | <0.005 | 0.004 |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 05 | 1645 | 11540. | 11.2 | 13.5 | 4.1 | 0.03 | 0.01 | 0.2 | 0.018 | 0.036 | | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 05 | 1830 | 15700. | 11.4 | 14.5 | 3.5 | 0.04 | <0.01 | 0.2 | 0.016 | 0.030 | | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 05 | 1915 | 20000. | 12.8 | 9.8 | 2.3 | 0.02 | <0.01 | 0.1 | <0.001 | 0.011 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 05 | 2000 | 35700. | 12.2 | 12.0 | 3.3 | 0.03 | <0.01 | 0.2 | 0.007 | 0.022 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 06 | 0845 | 40546. | 12.0 | 16.7 | 3.9 | 0.03 | <0.01 | 0.2 | 0.011 | 0.025 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 06 | 1030 | 35800. | 12. | 4.7 | 2.5 | 0.03 | <0.01 | 0.2 | 0.004 | 0.015 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 06 | 1230 | 41900. | 12.0 | 5.6 | 2.3 | 0.03 | <0.01 | 0.2 | 0.003 | 0.015 | | | <0.01 | <0.005 | | <0.005 | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JUNE 5-6, 1985

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 05 | 1015 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 05 | 1100 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 05 | 1145 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 05 | 1215 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 05 | 1230 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 05 | 1400 | | | | | | | | | | | | | |
| 10 BITTERROOT | 05 | 1300 | | | | | | | | | | | | | |
| 11 HARPER BR | 05 | 1445 | | | | | | | | | | | | | |
| 12 CHAMP 001 | 05 | 1600 | | | | | | | | | | | | | |
| 12 CHAMP 003 | 05 | 1530 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 05 | 1645 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 05 | 1830 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 05 | 1915 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 05 | 2000 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 06 | 0845 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 06 | 1030 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB CO | 06 | 1230 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JUNE 18-19, 1985

| | STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 18 | 0900 | 1063. | 12.1 | 4.7 | 3.1 | <0.01 | <0.01 | 0.2 | 0.014 | 0.024 | | | <0.01 | 0.008 | | <0.005 | 0.005 |
| 02 | BLACKFOOT | 18 | 0940 | 2200. | 13.0 | 6.9 | 3.1 | <0.01 | <0.01 | 0.1 | 0.002 | 0.011 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 03 | IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 | BEL MILLTN | 18 | 1030 | 3290. | 13.0 | 15.6 | 4.0 | <0.01 | <0.01 | 0.2 | 0.013 | 0.029 | | | <0.01 | 0.011 | | <0.005 | 0.003 |
| 05 | ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 | ABV STP | 18 | 1130 | 3290. | 13.5 | 13.3 | 3.9 | <0.01 | <0.01 | 0.2 | 0.010 | 0.023 | | | 0.01 | 0.024 | | 0.005 | 0.003 |
| 07 | STP EFFLNT | 18 | 1200 | 12.99 | 15.0 | 4.5 | 4.5 | 5.31 | 0.81 | 2.30 | 4.01 | 4.28 | | | <0.01 | 0.042 | | <0.005 | 0.001 |
| 08 | BEL STP | | | | | | | | | | | | | | | | | | |
| 09 | SHUFFIELDS | 18 | 1330 | 3300. | 14.5 | 12.8 | 4.1 | 0.01 | <0.01 | 0.2 | 0.024 | 0.041 | | | <0.01 | 0.009 | | <0.005 | 0.003 |
| 10 | BITTERROOT | 18 | 1240 | 4170. | 14.3 | 7.8 | 3.5 | 0.01 | <0.01 | 0.2 | 0.005 | 0.017 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 11 | HARPER BR | 18 | 1415 | 7470. | 15.4 | 8.1 | 3.2 | 0.01 | <0.01 | 0.2 | 0.009 | 0.024 | | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 12 | CHAMP 001 | | | | | | | | | | | | | | | | | | |
| 12 | CHAMP 003 | 18 | 1500 | 7.42 | 20.0 | 177.2 | 177.2 | <0.01 | 4.34 | 15.7 | 0.64 | 2.52 | | | <0.01 | 0.017 | | <0.005 | 0.004 |
| 13 | MARCURE | | | | | | | | | | | | | | | | | | |
| 14 | FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 | HUSON | 18 | 1600 | 7480. | 16.0 | 8.6 | 3.5 | <0.01 | <0.01 | 0.2 | 0.010 | 0.026 | | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 16 | 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 | ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | | | | | | | | |
| 19 | LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 | SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 | BEL ST REG | 19 | 1330 | 10100. | 15.4 | 6.3 | 3.3 | <0.01 | <0.01 | 0.3 | 0.006 | 0.016 | | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 22 | ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 | FLATHEAD R | 19 | 1430 | 23400. | 16.0 | 7.0 | 2.7 | <0.01 | <0.01 | 0.1 | <0.001 | 0.007 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 24 | PLAINS | | | | | | | | | | | | | | | | | | |
| 25 | ABV T FALL | 19 | 1530 | 33500. | 16.6 | 8.4 | 2.9 | <0.01 | <0.01 | 0.1 | 0.001 | 0.011 | | | <0.01 | 0.018 | | <0.005 | <0.001 |
| 26 | IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 | BEL T FALL | 19 | 1630 | 34133. | 16.0 | 10.4 | 3.1 | <0.01 | <0.01 | 0.2 | 0.002 | 0.013 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 28 | IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 | BEL NOXON | 19 | 1745 | 29300. | 14.0 | 2.6 | 2.1 | <0.01 | <0.01 | 0.1 | <0.001 | 0.009 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 30 | IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 | BEL CAB GO | 19 | 1900 | 35200. | 14.2 | 3.4 | 2.3 | 0.01 | <0.01 | 0.1 | <0.001 | 0.009 | | | <0.01 | 0.008 | | <0.005 | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JUNE 18-19, 1985

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 18 | 0900 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 18 | 0940 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 18 | 1030 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 18 | 1130 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 18 | 1200 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 18 | 1330 | | | | | | | | | | | | | |
| 10 BITTERROOT | 18 | 1240 | | | | | | | | | | | | | |
| 11 HARPER BR | 18 | 1415 | | | | | | | | | | | | | |
| 12 CHAMP 001 | | | | | | | | | | | | | | | |
| 12 CHAMP 003 | 18 | 1500 | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 18 | 1600 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 19 | 1330 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 19 | 1430 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 19 | 1530 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 19 | 1630 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 19 | 1745 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 19 | 1900 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JULY 10-11, 1985

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 10 | 0945 | 481. | 17.0 | 4.1 | 1.7 | 0.03 | <0.01 | 0.4 | 0.005 | 0.015 | | | <0.01 | 0.006 | | <0.005 | 0.003 |
| 02 BLACKFOOT | 10 | 0845 | 824. | 18.0 | 2.1 | 1.1 | <0.01 | <0.01 | 0.2 | <0.001 | 0.008 | | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 03 IN MILLTWN | | | | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 10 | 1045 | 1310. | 20.0 | 4.6 | 1.5 | <0.01 | <0.01 | 0.2 | 0.005 | 0.013 | | | <0.01 | 0.006 | | <0.005 | 0.002 |
| 05 ABV MSLA | | | | | | | | | | | | | | | | | | |
| 06 ABV STP | 10 | 1130 | 1310. | 20.5 | 4.0 | 1.4 | <0.01 | 0.03 | 0.2 | 0.003 | 0.012 | | | <0.01 | 0.023 | | <0.005 | 0.003 |
| 07 STP EFFLNT | 10 | 1200 | 12.61 | 14.0 | 30.0 | 8.2 | 0.15 | 4.55 | 5.26 | 2.32 | 2.49 | | | <0.01 | 0.033 | | <0.005 | 0.002 |
| 08 BEL STP | | | | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 10 | 1415 | 1320. | 21.0 | 4.2 | 1.5 | 0.01 | 0.05 | 0.3 | 0.033 | 0.039 | | | <0.01 | 0.005 | | <0.005 | 0.002 |
| 10 BITTERROOT | 10 | 1330 | 820. | 19.8 | 2.3 | 1.2 | 0.08 | 0.01 | 0.2 | 0.007 | 0.017 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 11 HARPER BR | 10 | 1515 | 2140. | 19.8 | 3.9 | 1.4 | 0.05 | 0.02 | 0.2 | 0.012 | 0.021 | | | <0.01 | 0.040 | | <0.005 | 0.002 |
| 12 CHAMP 001 | 10 | 1600 | 0.0 | 34.2 | 206. | 206. | <0.01 | 2.22 | 26.5 | 1.10 | 4.95 | | | <0.01 | 0.063 | | <0.005 | 0.007 |
| 12 CHAMP 003 | | | | | | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | | | | |
| 15 HUSON | 10 | 1645 | 2140. | 21.1 | 3.2 | 1.4 | 0.04 | 0.02 | 0.4 | 0.016 | 0.027 | | | <0.01 | 0.015 | | <0.005 | 0.002 |
| 16 9-MILE | | | | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 11 | 1030 | 3300. | 19.5 | 2.3 | 1.8 | <0.01 | 0.03 | 0.2 | 0.004 | 0.017 | | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 22 ABV FLATHD | | | | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 11 | 1130 | 9900. | 21.5 | 1.5 | 1.4 | <0.01 | <0.01 | 0.2 | <0.001 | 0.008 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 24 PLAINS | | | | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 11 | 1300 | 13200. | 21.7 | 1.7 | 1.6 | <0.01 | 0.03 | 0.2 | <0.001 | 0.008 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 26 IN T FALLS | | | | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 11 | 1400 | 13826. | 22.0 | 3.7 | 1.7 | <0.01 | <0.01 | 0.1 | <0.001 | 0.009 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 28 IN NOXON | | | | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 11 | 1515 | 13000. | 18.5 | 1.1 | 1.1 | <0.01 | 0.01 | 0.1 | <0.001 | 0.008 | | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 30 IN CAB GOR | | | | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 11 | 1615 | 15000. | 18.8 | 1.5 | 1.4 | <0.01 | 0.01 | 0.2 | <0.001 | 0.009 | | | <0.01 | <0.005 | | <0.005 | <0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.
STP EFFLUENT INCLUDES APPROXIMATELY 0.77 CFS DILUTION FROM CONSTRUCTION DEWATERING.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JULY 10-11, 1985

| STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 10 | 0945 | | | | | | | | | | | | | |
| 02 BLACKFOOT | 10 | 0845 | | | | | | | | | | | | | |
| 03 IN MILLTWN | | | | | | | | | | | | | | | |
| 04 BEL MILLTN | 10 | 1045 | | | | | | | | | | | | | |
| 05 ABV MSLA | | | | | | | | | | | | | | | |
| 06 ABV STP | 10 | 1130 | | | | | | | | | | | | | |
| 07 STP EFFLNT | 10 | 1200 | | | | | | | | | | | | | |
| 08 BEL STP | | | | | | | | | | | | | | | |
| 09 SHUFFIELDS | 10 | 1415 | | | | | | | | | | | | | |
| 10 BITTERROOT | 10 | 1330 | | | | | | | | | | | | | |
| 11 HARPER BR | 10 | 1515 | | | | | | | | | | | | | |
| 12 CHAMP 001 | 10 | 1600 | | | | | | | | | | | | | |
| 12 CHAMP 003 | | | | | | | | | | | | | | | |
| 13 MARCURE | | | | | | | | | | | | | | | |
| 14 FRENCHTOWN | | | | | | | | | | | | | | | |
| 15 HUSON | 10 | 1645 | | | | | | | | | | | | | |
| 16 9-MILE | | | | | | | | | | | | | | | |
| 17 ABV ALBERT | | | | | | | | | | | | | | | |
| 18 TARKIO | | | | | | | | | | | | | | | |
| 19 LOZEAU | | | | | | | | | | | | | | | |
| 20 SUPERIOR | | | | | | | | | | | | | | | |
| 21 BEL ST REG | 11 | 1030 | | | | | | | | | | | | | |
| 22 ABV FLATHD | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | 11 | 1130 | | | | | | | | | | | | | |
| 24 PLAINS | | | | | | | | | | | | | | | |
| 25 ABV T FALL | 11 | 1300 | | | | | | | | | | | | | |
| 26 IN T FALLS | | | | | | | | | | | | | | | |
| 27 BEL T FALL | 11 | 1400 | | | | | | | | | | | | | |
| 28 IN NOXON | | | | | | | | | | | | | | | |
| 29 BEL NOXON | 11 | 1515 | | | | | | | | | | | | | |
| 30 IN CAB GOR | | | | | | | | | | | | | | | |
| 31 BEL CAB GO | 11 | 1615 | | | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JUL 29-AUG 1,1985

| STATION | DAY | TIME | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTAL P | HARD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | 29 | 0945 | 349. | 15.4 | 5.6 | 1.9 | 0.02 | <0.01 | 0.2 | 0.005 | 0.017 | 147 | | <0.01 | <0.005 | | <0.005 | 0.004 |
| 02 BLACKFOOT | 29 | 1115 | 534. | 17.1 | 2.2 | 1.0 | <0.01 | <0.01 | 0.1 | 0.001 | 0.009 | 131 | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 03 IN MILLTWN | 29 | 1215 | | 19.0 | 10.0 | 2.9 | 0.01 | 0.04 | 0.4 | 0.018 | 0.039 | 151 | | <0.01 | 0.010 | | <0.005 | 0.005 |
| 04 BEL MILLTN | 29 | 1300 | 1020. | 19.7 | 4.9 | 1.1 | 0.01 | 0.04 | 0.3 | 0.009 | 0.020 | 139 | | <0.01 | <0.005 | | <0.005 | 0.004 |
| 05 ABV MSLA | 29 | 1530 | 1020. | 21.5 | 4.5 | 1.1 | <0.01 | <0.01 | 0.2 | 0.006 | 0.017 | 138 | | <0.01 | <0.005 | | <0.005 | 0.003 |
| 06 ABV STP | 29 | 1730 | 1020. | 21.9 | 5.4 | 1.3 | <0.01 | <0.01 | 0.2 | 0.006 | 0.016 | 135 | | <0.01 | <0.005 | | <0.005 | 0.003 |
| 07 STP EFFLNT | 29 | 1815 | 12.53 | 16.1 | 15.5 | 14.0 | 1.69 | 4.22 | 5.8 | 3.31 | 4.46 | 161 | | <0.01 | 0.053 | | <0.005 | 0.002 |
| 08 BEL STP | 29 | 1830 | 1030. | 21.3 | 6.0 | 2.1 | 0.14 | 0.38 | 0.8 | 0.26 | 0.34 | 135 | | <0.01 | <0.005 | | <0.005 | 0.003 |
| 09 SHUFFIELDS | 29 | 1915 | 1030. | 21.4 | 5.5 | 1.6 | 0.04 | 0.05 | 0.3 | 0.060 | 0.079 | 133 | | <0.01 | <0.005 | | <0.005 | 0.003 |
| 10 BITTERROOT | 29 | 1630 | 310. | 21.6 | 1.7 | 0.9 | 0.093 | 0.01 | 0.3 | 0.007 | 0.016 | 95 | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 11 HARPER BR | 30 | 0100 | 1480. | 19.6 | 4.5 | 1.4 | 0.09 | <0.01 | 0.3 | 0.023 | 0.037 | 123 | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 12 CHAMP 001 | 29 | 2100 | .11 | 21.9 | 103.7 | 93.7 | <0.01 | 6.18 | 21.9 | 2.06 | 7.01 | 165 | | <0.01 | 0.049 | | <0.005 | 0.004 |
| 12 CHAMP 003 | | | | | | | | | | | | | | | | | | |
| 13 MARCURE | 30 | 0330 | 1480. | 19.0 | 5.5 | 1.6 | 0.07 | 0.01 | 0.4 | 0.023 | 0.039 | 122 | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 14 FRENCHTOWN | 30 | 0500 | 1480. | 18.8 | 6.2 | 1.5 | 0.07 | 0.02 | 0.3 | 0.025 | 0.045 | 125 | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 15 HUSON | 30 | 0730 | 1480. | 18.5 | 5.9 | 1.6 | 0.05 | <0.01 | 0.3 | 0.018 | 0.035 | 124 | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 16 9-MILE | 30 | 1330 | | 20.6 | 2.3 | 1.1 | <0.01 | <0.01 | 0.4 | 0.014 | 0.027 | 119 | | <0.01 | <0.005 | | <0.005 | 0.003 |
| 17 ABV ALBERT | 30 | 1530 | | 20.9 | 1.7 | 1.1 | <0.01 | <0.01 | 0.3 | 0.013 | 0.023 | 119 | | <0.01 | <0.005 | | <0.005 | 0.003 |
| 18 TARKIO | 31 | 0515 | | 19.1 | 3.4 | 1.3 | <0.01 | <0.01 | 0.2 | 0.007 | 0.019 | 116 | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 19 LOZEAU | 31 | 0915 | | 18.7 | 2.7 | 1.3 | <0.01 | <0.01 | 0.2 | 0.004 | 0.021 | 116 | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 20 SUPERIOR | 31 | 1300 | | 20.5 | 2.2 | 1.2 | <0.01 | <0.01 | 0.3 | 0.001 | 0.019 | 114 | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 21 BEL ST REG | 31 | 2130 | 2140. | 20.7 | 2.9 | 1.6 | <0.01 | <0.01 | 0.4 | <0.001 | 0.019 | 109 | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 22 ABV FLATHD | 01 | 0630 | 2110. | 18.9 | 2.6 | 1.4 | <0.01 | <0.01 | 0.4 | 0.001 | 0.017 | 106 | | <0.01 | <0.005 | | <0.005 | 0.002 |
| 23 FLATHEAD R | 31 | 1630 | 10060. | 23.6 | 0.8 | 0.6 | <0.01 | <0.01 | 0.4 | <0.001 | 0.005 | 79 | | <0.01 | 0.043 | | <0.005 | <0.001 |
| 24 PLAINS | 01 | 0815 | 12500. | 22.3 | 2.2 | 0.8 | <0.01 | <0.01 | 0.2 | <0.001 | 0.007 | 90 | | <0.01 | <0.005 | | <0.005 | <0.001 |
| 25 ABV T FALL | 01 | 0930 | 12500. | 21.8 | 1.6 | 0.8 | <0.01 | <0.01 | 0.2 | <0.001 | 0.007 | 87 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 26 IN T FALLS | 01 | 1100 | | 22.8 | 3.8 | 1.1 | <0.01 | <0.01 | 0.2 | 0.001 | 0.010 | 88 | | <0.01 | 0.006 | | <0.005 | 0.001 |
| 27 BEL T FALL | 01 | 1200 | 13205. | 23.1 | 4.2 | 1.2 | <0.01 | <0.01 | 0.2 | <0.001 | 0.009 | 87 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 28 IN NOXON | 01 | 1300 | | 24.0 | 1.2 | 1.0 | <0.01 | <0.01 | 0.2 | <0.001 | 0.013 | 88 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 29 BEL NOXON | 01 | 1345 | 12500. | 22.1 | 0.8 | 0.6 | 0.02 | <0.01 | 0.1 | 0.004 | 0.011 | 85 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 30 IN CAB GOR | 01 | 1500 | | 23.0 | 0.7 | 0.6 | <0.01 | <0.01 | 0.2 | <0.001 | 0.009 | 84 | | <0.01 | <0.005 | | <0.005 | 0.001 |
| 31 BEL CAB GO | 01 | 1600 | 15200. | 21.5 | 1.2 | 0.7 | <0.01 | <0.01 | 0.2 | <0.001 | 0.013 | 84 | | <0.01 | <0.005 | | <0.005 | 0.001 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.
CHAMPION WASTEWATER SAMPLE IS FROM DISCHARGE 002. SEE FIELD NOTES IN APPENDIX TO REPORT.
STP EFFLUENT INCLUDES APPROXIMATELY 1.55 CFS DILUTION FROM CONSTRUCTION DEWATERING.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JUL 29-AUG 1,1985

| | STATION | DAY | TIME | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 29 | 0945 | 7.85 | 7.95 | 311 | 9.40 | <2.0 | <5.0 | | | 47.6 | | | | |
| 02 | BLACKFOOT | 29 | 1115 | 8.00 | 8.36 | 237 | 9.30 | <2.0 | <5.0 | | | 5.2 | | | | |
| 03 | IN MILLTWN | 29 | 1215 | 7.80 | 8.23 | 310 | 8.20 | <2.0 | <5.0 | | | 44.1 | | | | |
| 04 | BEL MILLTN | 29 | 1300 | 8.15 | 8.56 | 276 | 9.20 | <2.0 | 9.2 | | | 25.9 | | | | |
| 05 | ABV MSLA | 29 | 1530 | 8.60 | 8.76 | 266 | 10.20 | <2.0 | <5.0 | | | 24.0 | | | | |
| 06 | ABV STP | 29 | 1730 | 8.80 | 8.84 | 260 | 9.85 | <2.0 | <5.0 | | | 23.6 | | | | |
| 07 | STP EFFLNT | 29 | 1815 | 7.60 | 7.21 | 525 | 6.10 | 45.4 | 28.4 | | | 29.4 | | | | |
| 08 | BEL STP | 29 | 1830 | 8.65 | 8.63 | 278 | 9.40 | 3.3 | 9.0 | | | 24.5 | | | | |
| 09 | SHUFFIELDS | 29 | 1915 | 8.80 | 8.78 | 265 | 9.25 | <2.0 | 5.6 | | | 23.3 | | | | |
| 10 | BITTERROOT | 29 | 1630 | 8.60 | 8.52 | 202 | 10.65 | <2.0 | <5.0 | | | 5.3 | | | | |
| 11 | HARPER BR | 30 | 0100 | 8.55 | 8.52 | 246 | 8.20 | <2.0 | <5.0 | 8.8 | 8.0 | 16.1 | | | | |
| 12 | CHAMP 001 | 29 | 2100 | 8.40 | 8.02 | 2810 | | 134. | 871. | 1230. | 1230. | 677. | | | | |
| 12 | CHAMP 003 | | | | | | | | | | | | | | | |
| 13 | MARCURE | 30 | 0330 | 8.45 | 8.37 | 267 | 7.40 | <2.0 | <5.0 | 11.8 | 12.2 | 16.0 | | | | |
| 14 | FRENCHTOWN | 30 | 0500 | 8.35 | 8.20 | 273 | 7.15 | <2.0 | <5.0 | 10.9 | 11.8 | 17.7 | | | | |
| 15 | HUSON | 30 | 0730 | 8.35 | 8.28 | 266 | 7.40 | <2.0 | <5.0 | 10.5 | 10.5 | 16.1 | | | | |
| 16 | 9-MILE | 30 | 1330 | 8.60 | 8.41 | 259 | 10.05 | <2.0 | <5.0 | | | 15.7 | | | | |
| 17 | ABV ALBERT | 30 | 1530 | 8.75 | 8.64 | 257 | 10.40 | <2.0 | <5.0 | | | 15.5 | | | | |
| 18 | TARKIO | 31 | 0515 | 8.55 | 8.46 | 251 | 8.10 | <2.0 | <5.0 | | | 14.4 | | | | |
| 19 | LOZEAU | 31 | 0915 | 8.55 | 8.42 | 250 | 8.50 | <2.0 | <5.0 | | | 13.4 | | | | |
| 20 | SUPERIOR | 31 | 1300 | 8.65 | 8.47 | 243 | 9.45 | <2.0 | <5.0 | | | 13.5 | | | | |
| 21 | BEL ST REG | 31 | 2130 | 8.75 | 8.66 | 237 | 9.25 | <2.0 | <5.0 | | | 12.6 | | | | |
| 22 | ABV FLATHD | 01 | 0630 | 8.35 | 8.43 | 235 | 7.50 | <2.0 | <5.0 | | | 11.5 | | | | |
| 23 | FLATHEAD R | 31 | 1630 | 8.80 | 8.89 | 152 | 10.40 | <2.0 | <5.0 | | | 3.2 | | | | |
| 24 | PLAINS | 01 | 0815 | 8.35 | 8.44 | 177 | 7.90 | <2.0 | <5.0 | | | 4.4 | | | | |
| 25 | ABV T FALL | 01 | 0930 | 8.60 | 8.41 | 184 | 8.10 | <2.0 | <5.0 | | | 4.2 | | | | |
| 26 | IN T FALLS | 01 | 1100 | 8.45 | 8.47 | 175 | 8.35 | <2.0 | 5.2 | | | 4.0 | | | | |
| 27 | BEL T FALL | 01 | 1200 | 8.55 | 8.50 | 175 | 8.55 | <2.0 | <5.0 | | | 4.0 | | | | |
| 28 | IN NOXON | 01 | 1300 | 8.60 | 8.56 | 176 | 8.80 | <2.0 | <5.0 | | | 4.0 | | | | |
| 29 | BEL NOXON | 01 | 1345 | 8.25 | 8.18 | 174 | 7.20 | <2.0 | <5.0 | | | 4.0 | | | | |
| 30 | IN CAB GOR | 01 | 1500 | 8.20 | 8.22 | 173 | 7.70 | <2.0 | <5.0 | | | 4.0 | | | | |
| 31 | BEL CAB GO | 01 | 1600 | 8.20 | 8.24 | 171 | 8.25 | <2.0 | <5.0 | | | 4.4 | | | | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE.

TABLE 5

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| STATION | | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTL P | HRD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | MAX: | 7150. | 17.0 | 555. | 47.1 | 0.28 | 0.04 | 1.9 | 0.37 | 0.51 | 190 | 4.41 | 0.23 | 0.40 | 0.84 | <0.005 | 0.045 |
| | MIN: | 349. | 0.0 | 1.0 | 1.0 | 0.01 | <0.01 | 0.1 | 0.005 | 0.01 | 80 | 0.03 | <0.01 | <0.005 | 0.009 | <0.005 | 0.003 |
| | MEAN: | 1772.64 | 8.9 | 39.7 | 5.5 | 0.06 | 0.01 | 0.36 | 0.039 | 0.059 | 143. | 0.46 | 0.02 | 0.039 | 0.101 | 0.005 | 0.008 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 02 BLACKFOOT | MAX: | 5350. | 18.0 | 138. | 12.0 | 0.06 | 0.03 | 0.8 | 0.067 | 0.10 | 143 | 0.82 | <0.01 | 0.02 | 0.10 | <0.005 | 0.001 |
| | MIN: | 480. | 0.0 | 0.4 | 0.4 | <0.01 | <0.01 | 0.1 | <0.001 | 0.003 | 74 | 0.01 | <0.01 | <0.005 | 0.005 | <0.005 | 0.001 |
| | MEAN: | 1845.60 | 8.5 | 15.7 | 2.8 | 0.02 | 0.01 | 0.24 | 0.012 | 0.021 | 112. | 0.12 | 0.01 | 0.007 | 0.016 | 0.005 | 0.001 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 03 IN MILLTWN | MAX: | | 19.0 | 15.3 | 4.3 | 0.22 | 0.04 | 0.6 | 0.062 | 0.091 | 185 | 0.19 | 0.01 | 0.029 | 0.10 | <0.005 | 0.008 |
| | MIN: | | 2.0 | 3.2 | .9 | 0.01 | <0.01 | 0.1 | 0.009 | 0.01 | 139 | 0.06 | 0.01 | 0.01 | 0.04 | <0.005 | 0.005 |
| | MEAN: | 0.00 | 9.4 | 7.3 | 2.1 | 0.06 | 0.02 | 0.32 | 0.023 | 0.036 | 167. | 0.11 | 0.01 | 0.016 | 0.057 | 0.005 | 0.006 |
| | N: | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 04 BEL MILLTN | MAX: | 11300. | 20.0 | 256. | 26.5 | 0.18 | 0.05 | 1.3 | 0.19 | 0.27 | 168 | 2.54 | 0.12 | 0.22 | 0.49 | <0.005 | 0.020 |
| | MIN: | 1020. | 0.0 | 1.1 | .8 | <0.01 | <0.01 | 0.1 | 0.005 | 0.01 | 76 | 0.03 | <0.01 | <0.005 | 0.02 | <0.005 | 0.001 |
| | MEAN: | 3594.00 | 9.4 | 24.9 | 3.8 | 0.04 | 0.02 | 0.29 | 0.024 | 0.036 | 128. | 0.32 | 0.02 | 0.029 | 0.076 | 0.005 | 0.005 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 05 ABV MSLA | MAX: | 2320. | 21.5 | 15.8 | 5.6 | 0.12 | 0.02 | 0.5 | 0.050 | 0.080 | 168 | 0.15 | 0.01 | 0.06 | 0.05 | <0.005 | 0.006 |
| | MIN: | 1020. | 1.5 | 3.4 | 1.1 | 0.01 | <0.01 | 0.1 | 0.005 | <0.01 | 132 | 0.05 | 0.01 | <0.005 | 0.02 | <0.005 | 0.003 |
| | MEAN: | 1678.00 | 10.0 | 7.6 | 2.2 | 0.03 | 0.01 | 0.28 | 0.015 | 0.025 | 152. | 0.10 | 0.01 | 0.022 | 0.032 | 0.005 | 0.004 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 06 ABV STP | MAX: | 11300. | 21.9 | 269. | 27.9 | 0.18 | 0.03 | 1.3 | 0.19 | 0.25 | 165 | 2.62 | 0.12 | 0.24 | 0.48 | <0.005 | 0.019 |
| | MIN: | 1020. | 0.0 | 0.7 | 0.7 | <0.01 | 0.01 | 0.01 | 0.001 | 0.009 | 68 | 0.02 | 0.01 | <0.005 | 0.008 | <0.005 | 0.002 |
| | MEAN: | 3594.00 | 9.9 | 23.7 | 3.7 | 0.03 | 0.01 | 0.29 | 0.021 | 0.033 | 121. | 0.30 | 0.02 | 0.038 | 0.065 | 0.005 | 0.005 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 07 STP EFFLNT | MAX: | 13.30 | 18.4 | 54.8 | 48.2 | 9.77 | 19.3 | 33. | 8.30 | 9.93 | 174 | 0.18 | 0.03 | 0.111 | 0.03 | <0.005 | 0.003 |
| | MIN: | 9.59 | 11.0 | 4.5 | 4.5 | 0.01 | 0.81 | 2.30 | 0.49 | 1.2 | 149 | 0.03 | <0.01 | 0.033 | <0.005 | <0.005 | 0.001 |
| | MEAN: | 11.88 | 14.4 | 20.2 | 18.0 | 2.84 | 8.86 | 13.41 | 4.433 | 5.496 | 165. | 0.09 | 0.02 | 0.065 | 0.016 | 0.005 | 0.001 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 08 BEL STP | MA : | 2330. | 21.3 | 15.7 | 4.5 | 1.14 | 4.20 | 5.0 | 1.07 | 1.25 | 166 | 0.22 | 0.02 | 0.031 | 0.06 | 0.005 | 0.006 |
| | MIN: | 1030. | 4.0 | 4.8 | 1.4 | 0.02 | 0.38 | 0.8 | 0.26 | 0.34 | 131 | 0.05 | <0.01 | <0.005 | 0.02 | 0.005 | 0.003 |
| | MEAN: | 1688.00 | 11.3 | 8.7 | 3.1 | 0.35 | 1.80 | 2.68 | 0.737 | 0.830 | 149. | 0.10 | 0.01 | 0.019 | 0.032 | 0.005 | 0.004 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 09 SHUFFIELDS | MAX: | 11310. | 21.4 | 254. | 27.2 | 0.25 | 0.11 | 1.6 | 0.19 | 0.26 | 165 | 2.69 | 0.12 | 0.22 | 0.48 | <0.005 | 0.020 |
| | MIN: | 1030. | 0.0 | 1.2 | .9 | <0.01 | <0.01 | 0.1 | 0.019 | 0.03 | 71 | 0.02 | <0.01 | <0.005 | 0.009 | <0.005 | 0.001 |
| | MEAN: | 3604.00 | 10.2 | 23.5 | 3.8 | 0.05 | 0.04 | 0.36 | 0.044 | 0.058 | 121. | 0.31 | 0.02 | 0.027 | 0.065 | 0.005 | 0.005 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 6

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| STATION | | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | MAX: | 8.40 | 8.37 | 410 | 12.5 | 3.6 | 15.2 | 6.1 | 6.1 | 47.6 | 0.047 | 0.0885 | 0.0008 | 0.010 |
| | MIN: | 7.85 | 7.95 | 311 | 9.10 | <2.0 | <5.0 | 6.1 | 6.1 | 47.6 | 0.008 | 0.0354 | 0.0001 | 0.002 |
| | MEAN: | 8.18 | 8.20 | 363. | 10.99 | 2.3 | 8.8 | 6.1 | 6.1 | 47.6 | 0.0242 | 0.0531 | 0.0005 | 0.0046 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 02 BLACKFOOT | MAX: | 8.60 | 8.48 | 273 | 13.35 | 3.1 | 13.4 | 9.0 | 8.9 | 5.2 | 0.002 | 0.0146 | 0.0020 | 0.009 |
| | MIN: | 8.00 | 8.18 | 237 | 9.30 | <2.0 | <5.0 | 9.0 | 8.9 | 5.2 | <0.001 | 0.0045 | 0.0001 | <0.001 |
| | MEAN: | 8.31 | 8.35 | 256. | 11.47 | 2.2 | 8.9 | 9.0 | 8.9 | 5.2 | 0.0016 | 0.0095 | 0.0008 | 0.0044 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 03 IN MILLTWN | MAX: | 8.35 | 8.23 | 397 | 11.6 | <2.0 | 13.2 | 7.0 | 6.8 | 44.1 | | | | |
| | MIN: | 7.80 | 8.08 | 310 | 8.20 | <2.0 | <5.0 | 7.0 | 6.8 | 44.1 | | | | |
| | MEAN: | 8.05 | 8.16 | 359. | 10.06 | 2.0 | 8.4 | 7.0 | 6.8 | 44.1 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 04 BEL MILLTN | MAX: | 8.40 | 8.56 | 351 | 12.40 | 2.2 | 9.2 | 6.8 | 6.1 | 25.9 | 0.015 | 0.0299 | 0.0008 | 0.039 |
| | MIN: | 8.15 | 8.22 | 276 | 8.95 | <2.0 | <5.0 | 6.8 | 6.1 | 25.9 | 0.005 | 0.0155 | 0.0002 | 0.002 |
| | MEAN: | 8.26 | 8.36 | 317. | 10.93 | 2.0 | 7.5 | 6.8 | 6.1 | 25.9 | 0.0090 | 0.0234 | 0.0005 | 0.0106 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 05 ABV MSLA | MAX: | 8.60 | 8.76 | 349 | 12.95 | 2.5 | 9.6 | 6.9 | 6.7 | 24.0 | | | | |
| | MIN: | 8.30 | 8.28 | 266 | 9.40 | <2.0 | <5. | 6.9 | 6.7 | 24.0 | | | | |
| | MEAN: | 8.49 | 8.47 | 316. | 11.43 | 2.2 | 6.7 | 6.9 | 6.7 | 24.0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 06 ABV STP | MAX: | 8.80 | 8.84 | 342 | 13.25 | 2.6 | 13.6 | 7.6 | 6.6 | 23.6 | 0.020 | 0.0334 | 0.0016 | 0.019 |
| | MIN: | 8.35 | 8.37 | 260 | 9.40 | <2.0 | <5. | 7.6 | 6.6 | 23.6 | 0.006 | 0.0146 | 0.0003 | 0.003 |
| | MEAN: | 8.57 | 8.54 | 310. | 11.54 | 2.1 | 6.7 | 7.6 | 6.6 | 23.6 | 0.0112 | 0.0221 | 0.0007 | 0.0062 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 07 STP EFFLNT | MAX: | 7.60 | 7.66 | 764 | 6.7 | 55.7 | 115. | 27.5 | 25.7 | 29.4 | 0.033 | 0.0890 | 0.0047 | 0.058 |
| | MIN: | 7.20 | 6.91 | 525 | 5.05 | 9.8 | 28.4 | 27.5 | 25.7 | 29.4 | 0.013 | 0.0573 | 0.0004 | 0.003 |
| | MEAN: | 7.37 | 7.17 | 695. | 5.97 | 32.6 | 67.3 | 27.5 | 25.7 | 29.4 | 0.0224 | 0.0765 | 0.0023 | 0.0200 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 08 BEL STP | MAX: | 8.65 | 8.63 | 413 | 12.55 | 10.5 | 21.6 | 11.3 | 10.6 | 24.5 | | | | |
| | MIN: | 7.75 | 7.25 | 278 | 9.10 | 3.3 | 9.0 | 11.3 | 10.6 | 24.5 | | | | |
| | MEAN: | 8.18 | 7.87 | 358. | 10.86 | 5.8 | 14.1 | 11.3 | 10.6 | 24.5 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 09 SHUFFIELDS | MAX: | 8.80 | 8.78 | 344 | 13.5 | 2.5 | 11.8 | 8.4 | 6.4 | 23.3 | 0.018 | 0.0613 | 0.0017 | 0.008 |
| | MIN: | 8.40 | 8.25 | 265 | 9.25 | <2.0 | <5. | 8.4 | 6.4 | 23.3 | 0.007 | 0.0255 | 0.0005 | 0.003 |
| | MEAN: | 8.60 | 8.49 | 317. | 11.47 | 2.1 | 6.5 | 8.4 | 6.4 | 23.3 | 0.0120 | 0.0383 | 0.0010 | 0.0058 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 6

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| STATION | | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTL P | HRD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 BITTERROOT | MAX: | 11390. | 21.6 | 116. | 12.5 | 0.20 | 0.04 | 0.7 | 0.048 | 0.09 | 95 | 1.11 | <0.01 | 0.01 | 0.07 | <0.005 | 0.003 |
| | MIN: | 250. | 0.0 | 1.1 | 0.6 | 0.01 | <0.01 | 0.1 | <0.003 | 0.003 | 12 | 0.04 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| | MEAN: | 3275.80 | 10.4 | 16.6 | 3.1 | 0.06 | 0.01 | 0.25 | 0.013 | 0.022 | 47. | 0.18 | 0.01 | 0.005 | 0.016 | 0.005 | 0.001 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 11 HARPER BR | MAX: | 21400. | 19.8 | 175. | 19.7 | 0.22 | 0.04 | 1.0 | 0.10 | 0.17 | 129 | 1.68 | 0.06 | 0.12 | 0.28 | <0.005 | 0.01 |
| | MIN: | 1480. | 0.0 | 2.5 | 0.9 | 0.01 | 0.01 | 0.1 | 0.009 | 0.01 | 50 | 0.04 | <0.01 | <0.005 | 0.006 | <0.005 | <0.001 |
| | MEAN: | 6886.00 | 10.8 | 19.7 | 3.4 | 0.06 | 0.02 | 0.32 | 0.023 | 0.038 | 97. | 0.21 | 0.01 | 0.016 | 0.040 | 0.005 | 0.003 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 12 CHAMP 001 | MAX: | 28.96 | 34.2 | 206. | 206. | 0.01 | 6.43 | 26.5 | 2.43 | 7.01 | 165 | 0.34 | <0.01 | 0.063 | 0.69 | <0.005 | 0.007 |
| | MIN: | 0.0 | 13.0 | 103.2 | 93.7 | 0.01 | 2.22 | 19. | 1.10 | 3.38 | 165 | 0.33 | <0.01 | 0.038 | 0.69 | <0.005 | 0.002 |
| | MEAN: | 9.81 | 20.0 | 148.0 | 139.0 | 0.01 | 5.05 | 22.08 | 1.924 | 4.702 | 165. | 0.33 | 0.01 | 0.046 | 0.690 | 0.005 | 0.004 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 2 | 5 | 5 | 2 | 5 | 5 |
| 12 CHAMP 003 | MAX: | 48.12 | 22.5 | 177.2 | 177.2 | 0.81 | 8.6 | 34. | 3.16 | 4.30 | 217 | 0.76 | <0.01 | 0.13 | 8.0 | 0.008 | 0.009 |
| | MIN: | 0.0 | 0.0 | 33.1 | 31.8 | <0.01 | 2.3 | 7.0 | 0.44 | 1.0 | 128 | 0.34 | <0.01 | 0.017 | 0.68 | <0.005 | 0.001 |
| | MEAN: | 12.76 | 12.3 | 95.5 | 90.7 | 0.05 | 4.52 | 16.52 | 1.601 | 3.213 | 174. | 0.45 | 0.01 | 0.040 | 1.334 | 0.005 | 0.004 |
| | N: | 23 | 22 | 23 | 23 | 23 | 22 | 23 | 22 | 23 | 9 | 15 | 19 | 19 | 15 | 19 | 21 |
| 13 MARCURE | MAX: | 4060. | 19.3 | 19.9 | 5.5 | 0.15 | 0.13 | 0.8 | 0.067 | 0.103 | 131 | 0.23 | <0.01 | 0.016 | 0.12 | 0.006 | 0.005 |
| | MIN: | 1480. | 4.0 | 2.9 | 0.9 | 0.04 | 0.01 | 0.1 | 0.023 | 0.03 | 102 | 0.06 | <0.01 | <0.005 | 0.05 | <0.005 | 0.002 |
| | MEAN: | 2773.00 | 10.7 | 9.1 | 2.3 | 0.07 | 0.05 | 0.42 | 0.035 | 0.048 | 122. | 0.13 | 0.01 | 0.009 | 0.085 | 0.005 | 0.003 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 14 FRENCHTOWN | MAX: | 3170. | 21.0 | 19.7 | 5.4 | 0.15 | 0.03 | 4.3 | 0.061 | 0.092 | 131 | 0.18 | <0.01 | 0.014 | 0.08 | <0.005 | 0.004 |
| | MIN: | 1480. | 5.0 | 3.5 | 1.0 | 0.03 | <0.01 | 0.1 | 0.016 | 0.02 | 104 | 0.04 | <0.01 | <0.005 | 0.02 | <0.005 | 0.002 |
| | MEAN: | 2445.00 | 12.8 | 8.7 | 2.3 | 0.07 | 0.02 | 1.32 | 0.032 | 0.044 | 122. | 0.10 | 0.01 | 0.007 | 0.043 | 0.005 | 0.003 |
| | N: | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 4 | 4 |
| 15 HUSON | MAX: | 21480. | 21.1 | 246. | 22.8 | 0.23 | 0.08 | 1.2 | 0.17 | 0.21 | 130 | 2.36 | 0.08 | 0.15 | 0.32 | 0.005 | 0.010 |
| | MIN: | 1480. | 0.0 | 1.8 | 0.4 | 0.01 | <0.01 | 0.1 | 0.010 | 0.02 | 43 | 0.04 | <0.01 | 0.005 | 0.02 | 0.005 | 0.001 |
| | MEAN: | 6896.44 | 10.9 | 27.0 | 4.0 | 0.06 | 0.02 | 0.35 | 0.030 | 0.047 | 95. | 0.29 | 0.01 | 0.018 | 0.057 | 0.005 | 0.003 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 16 9-MILE | MAX: | 3980. | 20.6 | 23.5 | 5.1 | 0.14 | 0.02 | 0.7 | 0.054 | 0.093 | 129 | 0.22 | <0.01 | 0.020 | 0.09 | 0.005 | 0.004 |
| | MIN: | 3980. | 3.0 | 2.3 | 1.1 | <0.01 | <0.01 | 0.1 | 0.014 | 0.01 | 105 | 0.04 | <0.01 | <0.005 | 0.02 | 0.005 | 0.002 |
| | MEAN: | 3980.00 | 10.3 | 10.2 | 2.4 | 0.06 | 0.01 | 0.42 | 0.024 | 0.042 | 121. | 0.13 | 0.01 | 0.009 | 0.052 | 0.005 | 0.003 |
| | N: | 1 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 17 ABV ALBERT | MAX: | | 20.9 | 23.8 | 5.7 | 0.16 | 0.07 | 0.6 | 0.053 | 0.093 | 128 | 0.24 | <0.01 | 0.020 | 0.09 | 0.005 | 0.004 |
| | MIN: | | 3.0 | 1.7 | 1.1 | <0.01 | <0.01 | 0.1 | 0.013 | 0.01 | 106 | 0.04 | <0.01 | 0.005 | 0.01 | 0.005 | 0.002 |
| | MEAN: | 0.00 | 10.4 | 9.2 | 2.2 | 0.06 | 0.02 | 0.38 | 0.023 | 0.037 | 120. | 0.12 | 0.01 | 0.009 | 0.045 | 0.005 | 0.003 |
| | N: | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 6

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| STATION | | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 BITTERROOT | MAX: | 8.60 | 8.52 | 202 | 12.6 | <2.0 | 11.5 | 5.9 | 5.8 | 5.3 | 0.005 | 0.049 | 0.0033 | 0.014 |
| | MIN: | 8.05 | 8.04 | 130 | 9.55 | <2.0 | <5.0 | 5.9 | 5.8 | 5.3 | <0.001 | 0.0060 | 0.0002 | 0.005 |
| | MEAN: | 8.30 | 8.18 | 155. | 11.31 | 2.0 | 7.1 | 5.9 | 5.8 | 5.3 | 0.0030 | 0.0173 | 0.0014 | 0.0096 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 11 HARPER BR | MAX: | 8.60 | 8.66 | 275 | 13.7 | 2.3 | 12.0 | 18. | 17. | 16.1 | 0.012 | 0.0427 | 0.0028 | 0.016 |
| | MIN: | 8.30 | 8.19 | 229 | 8.20 | <2.0 | <5. | 3.6 | 3.6 | 16.1 | 0.006 | 0.0231 | 0.0002 | 0.003 |
| | MEAN: | 8.46 | 8.40 | 258. | 10.80 | 2.1 | 6.4 | 9.2 | 8.6 | 16.1 | 0.0098 | 0.0281 | 0.0013 | 0.0070 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 1 | 5 | 5 | 5 | 5 |
| 12 CHAMP 001 | MAX: | 8.40 | 8.02 | 2810 | | 134. | 871. | 1230. | 1230. | 677. | | | | |
| | MIN: | 8.40 | 8.02 | 2810 | | 134. | 871. | 1230. | 1230. | 677. | | | | |
| | MEAN: | 8.40 | 8.02 | 2810. | 0.00 | 134.0 | 871.0 | 1230.0 | 1230.0 | 677.0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 12 CHAMP 003 | MAX: | 8.40 | 8.05 | 3154 | | 113. | 852. | 1640. | 1510. | | 0.012 | 0.0618 | 0.063 | 0.017 |
| | MIN: | 7.67 | 7.39 | 2528 | | 34.1 | 567. | 787. | 755. | | <0.001 | 0.0329 | 0.0015 | 0.009 |
| | MEAN: | 8.10 | 7.79 | 2842. | 0.00 | 63.8 | 742.2 | 1167.0 | 1132.0 | 0.0 | 0.0054 | 0.0486 | 0.0147 | 0.0118 |
| | N: | 5 | 4 | 4 | 0 | 5 | 4 | 5 | 5 | 0 | 5 | 5 | 5 | 5 |
| 13 MARCURE | MAX: | 8.55 | 8.45 | 322 | 12.3 | 2.5 | 18.4 | 29. | 28. | 16.0 | | | | |
| | MIN: | 8.30 | 8.06 | 246 | 7.40 | <2.0 | <5.0 | 11.8 | 12.2 | 16.0 | | | | |
| | MEAN: | 8.42 | 8.26 | 292. | 10.01 | 2.1 | 10.4 | 19.2 | 18.2 | 16.0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 0 | 0 | 0 | 0 |
| 14 FRENCHTOWN | MAX: | 8.60 | 8.44 | 296 | 11.20 | 2.5 | 11.0 | 23. | 22. | 17.7 | | | | |
| | MIN: | 8.05 | 8.05 | 232 | 7.15 | <2.0 | <5.0 | 9.7 | 9.3 | 17.7 | | | | |
| | MEAN: | 8.35 | 8.22 | 273. | 9.80 | 2.1 | 6.7 | 14.5 | 14.4 | 17.7 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 1 | 0 | 0 | 0 | 0 |
| 15 HUSON | MAX: | 8.60 | 8.44 | 293 | 12.0 | 2.5 | 11.5 | 21. | 20. | 16.1 | 0.028 | 0.0574 | 0.0043 | 0.043 |
| | MIN: | 8.05 | 8.09 | 240 | 7.40 | <2.0 | <5. | 8.5 | 8.4 | 16.1 | 0.004 | 0.0149 | 0.0002 | 0.003 |
| | MEAN: | 8.29 | 8.24 | 273. | 9.86 | 2.1 | 6.3 | 12.4 | 11.9 | 16.1 | 0.0106 | 0.0286 | 0.0017 | 0.0122 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 5 | 5 | 5 | 5 |
| 16 9-MILE | MAX: | 8.60 | 8.41 | 292 | 12.1 | 2.9 | 13.3 | 9.1 | 8.4 | 15.7 | | | | |
| | MIN: | 8.00 | 8.09 | 244 | 7.55 | <2.0 | <5. | 9.1 | 8.4 | 15.7 | | | | |
| | MEAN: | 8.27 | 8.23 | 271. | 10.28 | 2.2 | 6.8 | 9.1 | 8.4 | 15.7 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 17 ABV ALBERT | MAX: | 8.75 | 8.64 | 290 | 12.5 | 2.7 | 15.3 | 9.3 | 8.9 | 15.5 | | | | |
| | MIN: | 8.15 | 8.10 | 248 | 8.10 | <2.0 | <5. | 9.3 | 8.9 | 15.5 | | | | |
| | MEAN: | 8.34 | 8.30 | 271. | 10.78 | 2.1 | 7.6 | 9.3 | 8.9 | 15.5 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 6

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| STATION | | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTL P | HRD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 TARKIO | MAX: | | 19.6 | 20.0 | 5.2 | 0.12 | <0.01 | 0.6 | 0.049 | 0.110 | 123 | 0.20 | <0.01 | 0.024 | 0.07 | 0.006 | 0.004 |
| | MIN: | | 4.0 | 3.0 | 1.3 | <0.01 | <0.01 | 0.1 | 0.007 | 0.019 | 103 | 0.03 | <0.01 | <0.005 | 0.01 | <0.005 | 0.002 |
| | MEAN: | 0.00 | 10.9 | 8.3 | 2.3 | 0.04 | 0.01 | 0.34 | 0.021 | 0.040 | 117. | 0.10 | 0.01 | 0.010 | 0.032 | 0.005 | 0.003 |
| | N: | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 19 LOZEAU | MAX: | | 19.2 | 19.8 | 5.2 | 0.12 | <0.01 | 0.6 | 0.046 | 0.083 | 124 | 0.19 | <0.01 | 0.02 | 0.07 | 0.006 | 0.004 |
| | MIN: | | 5.0 | 2.5 | 1.2 | <0.01 | <0.01 | 0.1 | 0.004 | 0.01 | 103 | 0.03 | <0.01 | <0.005 | 0.005 | 0.005 | 0.002 |
| | MEAN: | 0.00 | 10.8 | 8.2 | 2.2 | 0.04 | 0.01 | 0.38 | 0.018 | 0.033 | 118. | 0.10 | 0.01 | 0.012 | 0.039 | 0.005 | 0.003 |
| | N: | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 20 SUPERIOR | MAX: | | 20.5 | 20.1 | 5.2 | 0.11 | 0.02 | 0.6 | 0.044 | 0.079 | 123 | 0.19 | <0.01 | 0.019 | 0.07 | 0.006 | 0.003 |
| | MIN: | | 0.0 | 2.2 | 1.2 | <0.01 | <0.01 | 0.1 | 0.001 | 0.019 | 103 | 0.03 | <0.01 | <0.005 | 0.005 | <0.005 | 0.002 |
| | MEAN: | 0.00 | 8.9 | 6.7 | 2.1 | 0.04 | 0.01 | 0.32 | 0.015 | 0.030 | 116. | 0.08 | 0.01 | 0.008 | 0.027 | 0.005 | 0.002 |
| | N: | 0 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 5 | 5 | 6 | 6 | 5 | 6 | 6 |
| 21 BEL ST REG | MAX: | 24400. | 20.7 | 220. | 21.2 | 0.17 | 0.03 | 1.1 | 0.096 | 0.16 | 123 | 1.92 | 0.05 | 0.08 | 0.28 | 0.008 | 0.004 |
| | MIN: | 2140. | 0.0 | 1.1 | 0.6 | 0.01 | 0.01 | 0.1 | <0.001 | 0.009 | 42 | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| | MEAN: | 8804.80 | 10.7 | 22.4 | 3.4 | 0.04 | 0.01 | 0.29 | 0.018 | 0.034 | 87. | 0.22 | 0.01 | 0.011 | 0.036 | 0.005 | 0.002 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 22 ABV FLATHD | MAX: | 4630. | 18.9 | 15.6 | 4.3 | 0.03 | 0.13 | 0.4 | 0.024 | 0.059 | 118 | 0.11 | <0.01 | 0.01 | 0.05 | 0.007 | 0.003 |
| | MIN: | 2110. | 4.0 | 1.8 | 0.6 | <0.01 | <0.01 | 0.1 | 0.001 | 0.01 | 100 | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | 0.002 |
| | MEAN: | 3482.00 | 10.3 | 5.8 | 1.8 | 0.02 | 0.03 | 0.24 | 0.008 | 0.025 | 111. | 0.05 | 0.01 | 0.007 | 0.024 | 0.005 | 0.002 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 23 FLATHEAD R | MAX: | 23400. | 23.6 | 20.4 | 3.6 | 0.03 | 0.09 | 0.5 | 0.010 | 0.023 | 91 | 0.11 | <0.01 | 0.043 | 0.01 | 0.005 | <0.001 |
| | MIN: | 5390. | 0.0 | 0.8 | .5 | 0.01 | <0.01 | 0.1 | <0.001 | 0.002 | 79 | 0.02 | <0.01 | <0.005 | 0.005 | 0.005 | <0.001 |
| | MEAN: | 10750.00 | 11.6 | 5.1 | 1.3 | 0.02 | 0.01 | 0.16 | 0.003 | 0.010 | 86. | 0.04 | 0.01 | 0.007 | 0.007 | 0.005 | 0.001 |
| | N: | 25 | 25 | 24 | 24 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 24 PLAINS | MAX: | 14300. | 22.3 | 14.9 | 2.8 | 0.02 | <0.01 | 0.2 | 0.010 | 0.04 | 101 | 0.13 | <0.01 | <0.005 | 0.02 | 0.006 | <0.001 |
| | MIN: | 11000. | 3.5 | 1.9 | 0.8 | 0.01 | <0.01 | 0.1 | <0.001 | 0.007 | 90 | 0.03 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| | MEAN: | 12260.00 | 11.5 | 5.3 | 1.4 | 0.02 | 0.01 | 0.14 | 0.004 | 0.019 | 94. | 0.06 | 0.01 | 0.005 | 0.009 | 0.005 | 0.001 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 25 ABV T FALL | MAX: | 42900. | 22.0 | 137. | 13.4 | 0.06 | 0.03 | 0.8 | 0.075 | 0.12 | 101 | 1.40 | 0.03 | 0.09 | 0.21 | 0.006 | 0.004 |
| | MIN: | 9070. | 0.0 | 0.8 | 0.4 | <0.01 | <0.01 | 0.1 | <0.001 | <0.001 | 58 | 0.01 | <0.01 | <0.005 | 0.002 | <0.005 | <0.001 |
| | MEAN: | 19742.80 | 11.5 | 14.5 | 2.4 | 0.02 | 0.01 | 0.23 | 0.009 | 0.020 | 83. | 0.16 | 0.01 | 0.015 | 0.025 | 0.005 | 0.001 |
| | N: | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 26 IN T FALLS | MAX: | | 22.8 | 6.9 | 1.6 | <0.01 | <0.01 | 0.2 | 0.007 | 0.022 | 121 | 0.12 | <0.01 | 0.027 | 0.02 | 0.008 | 0.001 |
| | MIN: | | 4.0 | 1.0 | 0.4 | <0.01 | <0.01 | 0.1 | <0.001 | <0.01 | 88 | 0.02 | <0.01 | <0.005 | <0.005 | <0.005 | 0.001 |
| | MEAN: | 0.00 | 12.0 | 3.9 | 1.0 | 0.01 | 0.01 | 0.14 | 0.003 | 0.014 | 98. | 0.05 | 0.01 | 0.010 | 0.011 | 0.006 | 0.001 |
| | N: | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 6

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| STATION | | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 TARKIO | MAX: | 8.55 | 8.52 | 284 | 12.6 | 2.6 | 11.4 | 8.4 | 8.4 | 14.4 | | | | |
| | MIN: | 8.00 | 8.20 | 226 | 8.10 | <2.0 | <5. | 8.4 | 8.4 | 14.4 | | | | |
| | MEAN: | 8.36 | 8.34 | 261. | 10.67 | 2.2 | 6.4 | 8.4 | 8.4 | 14.4 | 0.0000 | 0.0000 | 0.0000 | 0.000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 19 LOZEAU | MAX: | 8.55 | 8.49 | 284 | 13.1 | 3.6 | 8.0 | 8.6 | 8.7 | 13.4 | | | | |
| | MIN: | 8.25 | 8.13 | 225 | 8.40 | <2.0 | <5. | 8.6 | 8.7 | 13.4 | | | | |
| | MEAN: | 8.43 | 8.34 | 262. | 10.56 | 2.3 | 5.6 | 8.6 | 8.7 | 13.4 | 0.0000 | 0.0000 | 0.0000 | 0.000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 20 SUPERIOR | MAX: | 8.67 | 8.65 | 279 | 13.3 | 2.6 | 9.6 | 8.4 | 9.0 | 13.5 | | | | |
| | MIN: | 7.95 | 8.05 | 220 | 7.85 | <2.0 | <5. | 8.4 | 9.0 | 13.5 | | | | |
| | MEAN: | 8.36 | 8.33 | 256. | 10.55 | 2.1 | 6.2 | 8.4 | 9.0 | 13.5 | 0.0000 | 0.0000 | 0.0000 | 0.000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 21 BEL ST REG | MAX: | 8.75 | 8.66 | 273 | 12.45 | 3.0 | 7.7 | 7.2 | 7.4 | 12.6 | 0.010 | 0.0433 | 0.0056 | 0.023 |
| | MIN: | 8.15 | 8.09 | 224 | 9.05 | <2.0 | <5. | 7.2 | 7.4 | 12.6 | 0.002 | 0.0115 | 0.0001 | 0.002 |
| | MEAN: | 8.39 | 8.34 | 253. | 10.86 | 2.2 | 5.5 | 7.2 | 7.4 | 12.6 | 0.0070 | 0.0221 | 0.0018 | 0.0098 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 22 ABV FLATHD | MAX: | 8.45 | 8.56 | 270 | 12.5 | 2.7 | 11.3 | 7.0 | 6.6 | 11.5 | | | | |
| | MIN: | 8.10 | 8.17 | 220 | 7.50 | <2.0 | <5. | 7.0 | 6.6 | 11.5 | | | | |
| | MEAN: | 8.29 | 8.37 | 250. | 10.40 | 2.1 | 6.3 | 7.0 | 6.6 | 11.5 | 0.0000 | 0.0000 | 0.0000 | 0.000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 23 FLATHEAD R | MAX: | 8.80 | 8.89 | 184 | 12.70 | <2.0 | <5. | 0.5 | 0.5 | 3.2 | 0.004 | 0.0140 | 0.0012 | 0.009 |
| | MIN: | 8.05 | 8.26 | 152 | 10.40 | <2.0 | <5. | 0.5 | 0.5 | 3.2 | <0.001 | 0.0054 | 0.0001 | 0.003 |
| | MEAN: | 8.55 | 8.49 | 170. | 11.69 | 2.0 | 5.0 | 0.5 | 0.5 | 3.2 | 0.0026 | 0.0104 | 0.0006 | 0.0054 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 24 PLAINS | MAX: | 8.45 | 8.48 | 213 | 13.2 | 2.2 | <5. | 2.0 | 1.9 | 4.4 | | | | |
| | MIN: | 8.20 | 8.18 | 177 | 7.90 | <2.0 | <5. | 2.0 | 1.9 | 4.4 | | | | |
| | MEAN: | 8.34 | 8.37 | 196. | 10.65 | 2.0 | 5.0 | 2.0 | 1.9 | 4.4 | 0.0000 | 0.0000 | 0.0000 | 0.000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 25 ABV T FALL | MAX: | 8.60 | 8.64 | 213 | 13.0 | <2.0 | <5. | 2.2 | 2.4 | 4.2 | 0.035 | 0.0244 | 0.0019 | 0.011 |
| | MIN: | 8.25 | 8.26 | 184 | 8.10 | <2.0 | <5. | 2.2 | 2.4 | 4.2 | 0.001 | 0.0068 | 0.0001 | 0.002 |
| | MEAN: | 8.45 | 8.39 | 196. | 11.07 | 2.0 | 5.0 | 2.2 | 2.4 | 4.2 | 0.0092 | 0.0120 | 0.0011 | 0.0068 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 26 IN T FALLS | MAX: | 8.45 | 8.47 | 216 | 12.6 | <2.0 | 5.2 | 2.0 | 1.9 | 4.0 | | | | |
| | MIN: | 8.23 | 8.25 | 175 | 7.80 | <2.0 | <5. | 2.0 | 1.9 | 4.0 | | | | |
| | MEAN: | 8.37 | 8.39 | 196. | 10.57 | 2.0 | 5.0 | 2.0 | 1.9 | 4.0 | 0.0000 | 0.0000 | 0.0000 | 0.000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 6

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| STATION | | FLOW (CFS) | T (C) | TSS | VOL TSS | NO3+ NO2 N | NH3 N | KJLD N | ORTHO P | TOTL P | HRD | FE T.R. | CU T.R. | ZN T.R. | MN T.R. | CD T.R. | AS T.R. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 BEL T FALL | MAX: | 42376. | 23.1 | 61.1 | 7.0 | 0.07 | 0.03 | 0.6 | 0.031 | 0.07 | 100 | 0.60 | <0.01 | 0.03 | 0.09 | 0.006 | 0.008 |
| | MIN: | 9031. | 0.0 | 0.8 | 0.4 | <0.01 | <0.01 | 0.1 | <0.001 | 0.001 | 56 | <0.01 | <0.01 | <0.005 | 0.005 | <0.005 | <0.001 |
| | MEAN: | 21108.08 | 11.2 | 11.9 | 2.1 | 0.02 | 0.01 | 0.21 | 0.008 | 0.018 | 82. | .11 | 0.01 | 0.007 | 0.018 | 0.005 | 0.001 |
| | N: | 25 | 24 | 25 | 25 | 24 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 28 IN NOXON | MAX: | | 24.0 | 11.3 | 2.0 | 0.04 | 0.02 | 0.2 | 0.006 | 0.020 | 106 | 0.14 | <0.01 | <0.005 | 0.02 | <0.005 | 0.001 |
| | MIN: | | 4.0 | 1.2 | .5 | 0.01 | 0.01 | 0.1 | <0.001 | <0.01 | 88 | 0.02 | <0.01 | <0.005 | 0.005 | <0.005 | 0.001 |
| | MEAN: | 0.00 | 12.5 | 3.5 | 1.1 | 0.02 | 0.01 | 0.12 | 0.003 | 0.013 | 94. | 0.06 | 0.01 | 0.005 | 0.010 | 0.005 | 0.001 |
| | N: | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 29 BEL NOXON | MAX: | 45600. | 22.1 | 9.9 | 2.9 | 0.08 | 0.03 | 0.4 | 0.023 | 0.03 | 100 | 0.13 | <0.01 | 0.02 | 0.03 | <0.005 | 0.002 |
| | MIN: | 7230. | 0.0 | 0.2 | 0.2 | <0.01 | <0.01 | 0.1 | <0.001 | <0.001 | 61 | 0.01 | <0.01 | <0.005 | <0.005 | <0.005 | <0.001 |
| | MEAN: | 20701.20 | 11.3 | 2.7 | 1.0 | 0.03 | 0.01 | 0.15 | 0.005 | 0.012 | 80. | 0.04 | 0.01 | 0.006 | 0.014 | 0.005 | 0.001 |
| | N: | 25 | 24 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 10 | 15 | 21 | 21 | 15 | 21 | 23 |
| 30 IN CAB GOR | MAX: | | 23.0 | 1.9 | 1.4 | 0.04 | <0.01 | 0.2 | 0.003 | 0.013 | 98 | 0.07 | <0.01 | 0.123 | 0.02 | <0.005 | 0.002 |
| | MIN: | | 3.0 | 0.7 | .5 | <0.01 | <0.01 | 0.1 | <0.001 | 0.009 | 82 | 0.02 | <0.01 | <0.005 | 0.007 | <0.005 | 0.001 |
| | MEAN: | 0.00 | 11.4 | 1.4 | 0.9 | 0.02 | 0.01 | 0.14 | 0.002 | 0.010 | 90. | 0.03 | 0.01 | 0.029 | 0.014 | 0.005 | 0.001 |
| | N: | 0 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 |
| 31 BEL CAB GO | MAX: | 51800. | 21.5 | 8.7 | 2.9 | 0.06 | 0.09 | 0.4 | 0.016 | 0.03 | 98 | 0.12 | <0.01 | 0.009 | 0.02 | <0.005 | 0.002 |
| | MIN: | 8810. | 0.0 | 0.4 | 0.4 | 0.01 | <0.01 | 0.1 | <0.001 | <0.001 | 62 | 0.01 | <0.01 | <0.005 | 0.005 | <0.005 | <0.001 |
| | MEAN: | 24475.00 | 11.4 | 2.8 | 1.1 | 0.02 | 0.02 | 0.17 | 0.004 | 0.011 | 79. | 0.04 | 0.01 | 0.006 | 0.011 | 0.005 | 0.001 |
| | N: | 24 | 23 | 24 | 24 | 24 | 24 | 24 | 24 | 24 | 9 | 14 | 20 | 20 | 14 | 20 | 22 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT FLOW(CFS) AND TEMPERATURE(DEG. C). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 6

SHALLOW-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| STATION | | PH FLD | PH LAB | SPEC COND | D.O. | BOD5 | COD | COLOR NAT | COLOR PH AD | SO4 | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 BEL T FALL | MAX: | 8.70 | 8.50 | 211 | 12.7 | <2.0 | <5. | 1.9 | 1.9 | 4.0 | 0.005 | 0.0197 | 0.0022 | 0.014 |
| | MIN: | 8.27 | 8.24 | 175 | 8.30 | <2.0 | <5. | 1.9 | 1.9 | 4.0 | 0.001 | 0.0045 | 0.0003 | 0.002 |
| | MEAN: | 8.45 | 8.42 | 196. | 10.44 | 2.0 | 5.0 | 1.9 | 1.9 | 4.0 | 0.0026 | 0.0096 | 0.0009 | 0.0070 |
| | N: | 5 | 5 | 5 | 6 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 28 IN NOXON | MAX: | 8.60 | 8.56 | 221 | 12.5 | <2.0 | <5. | 1.8 | 1.9 | 4.0 | | | | |
| | MIN: | 8.05 | 8.17 | 176 | 8.55 | <2.0 | <5. | 1.8 | 1.9 | 4.0 | | | | |
| | MEAN: | 8.32 | 8.36 | 195. | 10.61 | 2.0 | 5.0 | 1.8 | 1.9 | 4.0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 29 BEL NOXON | MAX: | 8.35 | 8.33 | 207 | 12.20 | <2.0 | <5. | 0.5 | 0.3 | 4.0 | 0.005 | 0.0138 | 0.0012 | 0.010 |
| | MIN: | 8.00 | 8.15 | 174 | 6.45 | <2.0 | <5. | 0.5 | 0.3 | 4.0 | <0.001 | 0.0041 | 0.0001 | 0.003 |
| | MEAN: | 8.18 | 8.21 | 189. | 9.36 | 2.0 | 5.0 | 0.5 | 0.3 | 4.0 | 0.0020 | 0.0076 | 0.0007 | 0.0062 |
| | N: | 5 | 5 | 5 | 6 | 5 | 5 | 1 | 1 | 1 | 5 | 5 | 5 | 5 |
| 30 IN CAB GOR | MAX: | 8.40 | 8.43 | 206 | 12.9 | <2.0 | <5. | 1.7 | 1.5 | 4.0 | | | | |
| | MIN: | 8.04 | 8.14 | 170 | 7.70 | <2.0 | <5. | 1.7 | 1.5 | 4.0 | | | | |
| | MEAN: | 8.18 | 8.25 | 187. | 10.33 | 2.0 | 5.0 | 1.7 | 1.5 | 4.0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 31 BEL CAB GO | MAX: | 8.25 | 8.48 | 205 | 12.85 | <2.0 | <5.0 | | | 4.4 | 0.004 | 0.0275 | 0.0096 | 0.051 |
| | MIN: | 8.10 | 8.11 | 171 | 7.85 | <2.0 | <5.0 | | | 4.4 | 0.001 | 0.0050 | 0.0004 | 0.001 |
| | MEAN: | 8.19 | 8.27 | 185. | 9.53 | 2.0 | 5.0 | 0.0 | 0.0 | 4.4 | 0.0022 | 0.0134 | 0.0026 | 0.0138 |
| | N: | 4 | 4 | 4 | 5 | 4 | 4 | 0 | 0 | 1 | 5 | 5 | 5 | 5 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT PH(STANDARD UNITS), S.C.(UMHOS/CM), AND COLOR(COLOR UNITS). A.S. MEANS ACID SOLUBLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 6

Table 7.A. Results of Organic* Analysis of Clark Fork River and Champion Wastewater Samples, Fall 1984

STATION
11

Sample Number
CLARK FORK
AT HARPER BR.
9-13-85

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: USEPA REGION 8 Case No: —
Lab Sample ID No: CHAMPION INTERNATIONAL QC Report No:
Sample Matrix: AQUEOUS Contract No.:
Data Release Authorized By: A. CURTIS Date Sample Received: 11-29-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 12-6-84
DATE ANALYZED: 12-6-84
PERCENT MOISTURE: —
CONC/DILUTION FACTOR: 1000

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (21A) | 88-06-2 | 2,4,6- trichlorophenol | < 2 |
| (22A) | 59-50-7 | p-chloro-m-cresol | |
| (24A) | 95-57-8 | 2- chlorophenol | |
| (31A) | 120-83-2 | 2,4-dichlorophenol | |
| (34A) | 105-67-9 | 2,4-dimethylphenol | |
| (57A) | 88-75-5 | 2- nitrophenol | |
| (58A) | 100-02-7 | 4-nitrophenol | |
| (59A) | 51-28-5 | 2,4-dinitrophenol | |
| (60A) | 534-52-1 | 4,6-dinitro-2-methylphenol | |
| (64A) | 87-86-5 | pentachlorophenol | |
| (65A) | 108-95-2 | phenol | |
| | 65-85-0 | benzoic acid | |
| | 95-48-7 | 2-methylphenol | |
| | 108-39-4 | 4-methylphenol | |
| | 95-95-4 | 2,4,5-trichlorophenol | |
| (1B) | 83-32-9 | acenaphthene | |
| (5B) | 92-87-5 | benzidine | |
| (8B) | 120-82-1 | 1,2,4-trichlorobenzene | |
| (9B) | 118-74-1 | hexachlorobenzene | |
| (12B) | 67-72-1 | hexachloroethane | |
| (18B) | 111-44-4 | bis(2-chloroethyl)ether | |
| (20B) | 91-58-7 | 2-chloronaphthalene | |
| (25B) | 95-50-1 | 1,2-dichlorobenzene | |
| (26B) | 541-73-1 | 1,3-dichlorobenzene | |
| (27B) | 106-46-7 | 1,4-dichlorobenzene | |
| (28B) | 91-94-1 | 3,3'-dichlorobenzidine | |
| (35B) | 121-14-2 | 2,4-dinitrotoluene | |
| (36B) | 606-20-2 | 2,6-dinitrotoluene | |
| (37B) | 122-66-7 | 1,2-diphenylhydrazine | |
| (39B) | 206-44-0 | fluoranthene | |
| (40B) | 7005-72-3 | 4-chlorophenyl phenyl ether | |
| (41B) | 101-55-3 | 4-bromophenyl phenyl ether | |
| (42B) | 39638-32-9 | bis (2-chloroisopropyl) ether | |
| (43B) | 111-91-1 | bis (2-chloroethoxyl) methane | |

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (52B) | 87-68-3 | hexachlorobutadiene | < 2 |
| (53B) | 77-47-4 | hexachlorocyclopentadiene | |
| (54B) | 78-59-1 | isophorone | |
| (55B) | 91-20-3 | naphthalene | |
| (56B) | 98-95-3 | nitrobenzene | |
| (61B) | 62-75-9 | N-nitrosodimethylamine | |
| (62B) | 86-30-6 | N-nitrosodiphenylamine | |
| (63B) | 621-64-7 | N-nitrosodipropylamine | |
| (66B) | 117-81-7 | bis (2-ethylhexyl) phthalate | 2.5 |
| (67B) | 85-68-7 | benzyl butyl phthalate | < 2 |
| (68B) | 84-74-2 | di-n-butyl phthalate | |
| (69B) | 117-84-0 | di-n-octyl phthalate | |
| (70B) | 84-66-2 | diethyl phthalate | |
| (71B) | 131-11-3 | dimethyl phthalate | |
| (72B) | 56-55-3 | benzo(a)anthracene | |
| (73B) | 50-32-8 | benzo(a)pyrene | |
| (74B) | 205-99-2 | benzo(b)fluoranthene | |
| (75B) | 207-08-9 | benzo(k)fluoranthene | |
| (76B) | 218-01-9 | chrysene | |
| (77B) | 208-96-8 | acenaphthylene | |
| (78B) | 120-12-7 | anthracene | |
| (79B) | 191-24-2 | benzo(ghi)perylene | |
| (80B) | 86-73-7 | fluorene | |
| (81B) | 85-01-8 | phenanthrene | |
| (82B) | 53-70-3 | dibenzo(a,h)anthracene | |
| (83B) | 193-39-5 | indeno(1,2,3-cd)pyrene | |
| (84B) | 129-00-0 | pyrene | |
| | 62-53-3 | aniline | |
| | 100-51-6 | benzyl alcohol | |
| | 106-47-8 | 4-chloroaniline | |
| | 132-64-9 | dibenzofuran | |
| | 91-57-6 | 2-methylnaphthalene | |
| | 88-74-4 | 2-nitroaniline | |
| | 99-09-2 | 3-nitroaniline | |
| | 100-01-6 | 4-nitroaniline | |

1983



* Note: Volatile Compounds Not Analyzed

STATION
11

Table 7.A. Continued

Sample Number: CLARK FORK AT HARPER BR. ~~9-13-85~~

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: USEPA REGION 8
Lab Sample ID No: CHAMPION INTERNATIONAL
Sample Matrix: AQUEOUS
Data Release Authorized By: A. CURTIS

Case No: —
QC Report No:
Contract No.:
Date Sample Received: 11-27-84

VOLATILES N/A

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (2V) | 107-02-8 | acrolein | |
| (3V) | 107-13-1 | acrylonitrile | |
| (4V) | 71-43-2 | benzene | |
| (6V) | 56-23-5 | carbon tetrachloride | |
| (7V) | 108-90-7 | chlorobenzene | |
| (10V) | 107-06-2 | 1,2-dichloroethane | |
| (11V) | 71-55-6 | 1,1,1-trichloroethane | |
| (13V) | 75-34-3 | 1,1-dichloroethane | |
| (14V) | 79-00-5 | 1,1,2-trichloroethane | |
| (15V) | 79-34-5 | 1,1,2,2-tetrachloroethane | |
| (16V) | 75-00-3 | chloroethane | |
| (19V) | 110-75-8 | 2-chloroethylvinyl ether | |
| (23V) | 67-66-3 | chloroform | |
| (29V) | 75-35-4 | 1,1-dichloroethene | |
| (30V) | 156-60-5 | trans-1,2-dichloroethene | |
| (32V) | 78-87-5 | 1,2-dichloropropane | |
| (33V) | 10061-02-6 | trans-1,3-dichloropropene | |
| | 10061-01-05 | cis-1,3-dichloropropene | |
| (38V) | 100-41-4 | ethylbenzene | |
| (44V) | 75-09-2 | methylene chloride | |
| (45V) | 74-87-3 | chloromethane | |
| (46V) | 74-83-9 | bromomethane | |
| (47V) | 75-25-2 | bromoform | |
| (48V) | 75-27-4 | bromodichloromethane | |
| (49V) | 75-69-4 | fluorotrichloromethane | |
| (50V) | 75-71-8 | dichlorodifluoromethane | |
| (51V) | 124-48-1 | chlorodibromomethane | |
| (85V) | 127-18-4 | tetrachloroethene | |
| (86V) | 108-88-3 | toluene | |
| (87V) | 79-01-6 | trichloroethene | |
| (88V) | 75-01-4 | vinyl chloride | |
| | 67-64-1 | acetone | |
| | 78-93-3 | 2-butanone | |
| | 75-15-0 | carbondisulfide | |
| | 519-78-6 | 2-hexanone | |
| | 108-10-1 | 4-methyl-2-pentanone | |
| | 100-42-5 | styrene | |
| | 108-05-4 | vinyl acetate | |
| | 1330-20-7 | total xylenes | |
| | | 2-PENTANONE | |

PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 12-6-84
DATE ANALYZED: 12-6-84
PERCENT MOISTURE: —
CONC./DILUTION FACTOR: 1000

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (89P) | 309-00-2 | aldrin | < 2 |
| (90P) | 60-57-1 | dieldrin | |
| (91P) | 57-74-9 | chlordane | |
| (92P) | 50-29-3 | 4,4'-DDT | |
| (93P) | 72-55-9 | 4,4'-DDE | |
| (94P) | 72-54-8 | 4,4'-DDD | |
| (95P) | 115-29-7 | α-endosulfan | |
| (96P) | 115-29-7 | β-endosulfan | |
| (97P) | 1031-07-8 | endosulfan sulfate | |
| (98P) | 72-20-8 | endrin | |
| (99P) | 7421-93-4 | endrin aldehyde | |
| (100P) | 76-44-8 | heptachlor | |
| (101P) | 1024-57-3 | heptachlor epoxide | |
| (102P) | 319-84-6 | α-BHC | |
| (103P) | 319-85-7 | β-BHC | |
| (104P) | 319-86-8 | δ-BHC | |
| (105P) | 58-89-9 | γ-BHC (lindane) | |
| (106P) | 53469-21-9 | PCB-1242 | N/A |
| (107P) | 11097-69-1 | PCB-1254 | |
| (108P) | 11104-28-2 | PCB-1221 | |
| (109P) | 11141-16-5 | PCB-1232 | |
| (110P) | 12672-29-6 | PCB-1248 | |
| (111P) | 11096-82-5 | PCB-1260 | |
| (112P) | 12674-11-2 | PCB-1016 | |
| (113P) | 8001-35-2 | toxaphene | |

DIOXINS N/A

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (129B) | 1746-01-6 | 2,3,7,8-tetrachlorodibenzo-p-dioxin | |

December 1983

Table 7.A. Continued

STATION
12

| Sample Number |
|---|
| DISCHARGE |

003
8-14-85

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: USEPA REGION 8 Case No: —
Lab Sample ID No: CHAMPION INTERNATIONAL QC Report No:
Sample Matrix: AQUEOUS Contract No.:
Data Release Authorized By: A. CURTIS Date Sample Received: 11-29-84

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 12-6-84
DATE ANALYZED: 12-6-84
PERCENT MOISTURE: —
CONC./DILUTION FACTOR: 100

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (21A) | 88-06-2 | 2,4,6- trichlorophenol | <20 |
| (22A) | 59-50-7 | p-chloro-m-cresol | |
| (24A) | 95-57-8 | 2- chlorophenol | |
| (31A) | 120-83-2 | 2,4-dichlorophenol | |
| (34A) | 105-67-9 | 2,4-dimethylphenol | |
| (57A) | 88-75-5 | 2- nitrophenol | |
| (58A) | 100-02-7 | 4-nitrophenol | |
| (59A) | 51-28-5 | 2,4-dinitrophenol | |
| (60A) | 534-52-1 | 4,6-dinitro-2-methylphenol | |
| (64A) | 87-86-5 | pentachlorophenol | |
| (65A) | 108-95-2 | phenol | |
| | 65-85-0 | benzoic acid | |
| | 95-48-7 | 2-methylphenol | |
| | 108-39-4 | 4-methylphenol | |
| | 95-95-4 | 2,4,5-trichlorophenol | |
| (1B) | 83-32-9 | acenaphthene | |
| (5B) | 92-87-5 | benzidine | |
| (8B) | 120-82-1 | 1,2,4-trichlorobenzene | |
| (9B) | 118-74-1 | hexachlorobenzene | |
| (12B) | 67-72-1 | hexachloroethane | |
| (18B) | 111-44-4 | bis(2-chloroethyl)ether | |
| (20B) | 91-58-7 | 2-chloronaphthalene | |
| (25B) | 95-50-1 | 1,2-dichlorobenzene | |
| (26B) | 541-73-1 | 1,3-dichlorobenzene | |
| (27B) | 106-46-7 | 1,4-dichlorobenzene | |
| (28B) | 91-94-1 | 3,3'-dichlorobenzidine | |
| (35B) | 121-14-2 | 2,4-dinitrotoluene | |
| (36B) | 606-20-2 | 2,6-dinitrotoluene | |
| (37B) | 122-66-7 | 1,2-diphenylhydrazine | |
| (39B) | 206-44-0 | fluoranthene | |
| (40B) | 7005-72-3 | 4-chlorophenyl phenyl ether | |
| (41B) | 101-55-3 | 4-bromophenyl phenyl ether | |
| (42B) | 39638-32-9 | bis (2-chloroisopropyl) ether | |
| (43B) | 111-91-1 | bis (2-chloroethoxyl) methane | |

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (52B) | 87-68-3 | hexachlorobutadiene | <20 |
| (53B) | 77-47-4 | hexachlorocyclopentadiene | |
| (54B) | 78-59-1 | isophorone | |
| (55B) | 91-20-3 | naphthalene | |
| (56B) | 98-95-3 | nitrobenzene | |
| (61B) | 62-75-9 | N-nitrosodimethylamine | |
| (62B) | 86-30-6 | N-nitrosodiphenylamine | |
| (63B) | 621-64-7 | N-nitrosodipropylamine | |
| (66B) | 117-81-7 | bis (2-ethylhexyl) phthalate | |
| (67B) | 85-68-7 | benzyl butyl phthalate | |
| (68B) | 84-74-2 | di-n-butyl phthalate | |
| (69B) | 117-84-0 | di-n-octyl phthalate | |
| (70B) | 84-66-2 | diethyl phthalate | |
| (71B) | 131-11-3 | dimethyl phthalate | |
| (72B) | 56-55-3 | benzo(a)anthracene | |
| (73B) | 50-32-8 | benzo(a)pyrene | |
| (74B) | 205-99-2 | benzo(b)fluoranthene | |
| (75B) | 207-08-9 | benzo(k)fluoranthene | |
| (76B) | 218-01-9 | chrysene | |
| (77B) | 208-96-8 | acenaphthylene | |
| (78B) | 120-12-7 | anthracene | |
| (79B) | 191-24-2 | benzo(ghi)perylene | |
| (80B) | 86-73-7 | fluorene | |
| (81B) | 85-01-8 | phenanthrene | |
| (82B) | 53-70-3 | dibenzo(a,h)anthracene | |
| (83B) | 193-39-5 | indeno(1,2,3-cd)pyrene | |
| (84B) | 129-00-0 | pyrene | |
| | 62-53-3 | aniline | |
| | 100-51-6 | benzyl alcohol | |
| | 106-47-8 | 4-chloroaniline | |
| | 132-64-9 | dibenzofuran | |
| | 91-57-6 | 2-methylnaphthalene | |
| | 88-74-4 | 2-nitroaniline | |
| | 99-09-2 | 3-nitroaniline | |
| | 100-01-6 | 4-nitroaniline | |

1983

Table 7.A. Continued

STATION
12

| Sample Number |
|---|
| DISCHARGE |

## ORGANICS ANALYSIS DATA SHEET

Laboratory Name: USEPA REGION 8 — Case No: — 003 8-14-85
Lab Sample ID No: CHAMPION INTERNATIONAL — QC Report No:
Sample Matrix: AQUEOUS — Contract No.:
Data Release Authorized By: A. CURTIS — Date Sample Received: 11-29-84

### VOLATILES N/A

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (2V) | 107-02-8 | acrolein | |
| (3V) | 107-13-1 | acrylonitrile | |
| (4V) | 71-43-2 | benzene | |
| (6V) | 56-23-5 | carbon tetrachloride | |
| (7V) | 108-90-7 | chlorobenzene | |
| (10V) | 107-06-2 | 1,2-dichloroethane | |
| (11V) | 71-55-6 | 1,1,1-trichloroethane | |
| (13V) | 75-34-3 | 1,1-dichloroethane | |
| (14V) | 79-00-5 | 1,1,2-trichloroethane | |
| (15V) | 79-34-5 | 1,1,2,2-tetrachloroethane | |
| (16V) | 75-00-3 | chloroethane | |
| (19V) | 110-75-8 | 2-chloroethylvinyl ether | |
| (23V) | 67-66-3 | chloroform | |
| (29V) | 75-35-4 | 1,1-dichloroethene | |
| (30V) | 156-60-5 | trans-1,2-dichloroethene | |
| (32V) | 78-87-5 | 1,2-dichloropropane | |
| (33V) | 10061-02-6 | trans-1,3-dichloropropene | |
| | 10061-01-05 | cis-1,3-dichloropropene | |
| (38V) | 100-41-4 | ethylbenzene | |
| (44V) | 75-09-2 | methylene chloride | |
| (45V) | 74-87-3 | chloromethane | |
| (46V) | 74-83-9 | bromomethane | |
| (47V) | 75-25-2 | bromoform | |
| (48V) | 75-27-4 | bromodichloromethane | |
| (49V) | 75-69-4 | fluorotrichloromethane | |
| (50V) | 75-71-8 | dichlorodifluoromethane | |
| (51V) | 124-48-1 | chlorodibromomethane | |
| (85V) | 127-18-4 | tetrachloroethene | |
| (86V) | 108-88-3 | toluene | |
| (87V) | 79-01-6 | trichloroethene | |
| (88V) | 75-01-4 | vinyl chloride | |
| | 67-64-1 | acetone | |
| | 78-93-3 | 2-butanone | |
| | 75-15-0 | carbondisulfide | |
| | 519-78-6 | 2-hexanone | |
| | 108-10-1 | 4-methyl-2-pentanone | |
| | 100-42-5 | styrene | |
| | 108-05-4 | vinyl acetate | |
| | 1330-20-7 | total xylenes | |
| | | 2-PENTANONE | |

### PESTICIDES

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 12-6-84
DATE ANALYZED: 12-6-84
PERCENT MOISTURE: —
CONC./DILUTION FACTOR: 100

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (89P) | 309-00-2 | aldrin | <20 |
| (90P) | 60-57-1 | dieldrin | |
| (91P) | 57-74-9 | chlordane | |
| (92P) | 50-29-3 | 4,4'-DDT | |
| (93P) | 72-55-9 | 4,4'-DDE | |
| (94P) | 72-54-8 | 4,4'-DDD | |
| (95P) | 115-29-7 | α-endosulfan | |
| (96P) | 115-29-7 | β-endosulfan | |
| (97P) | 1031-07-8 | endosulfan sulfate | |
| (98P) | 72-20-8 | endrin | |
| (99P) | 7421-93-4 | endrin aldehyde | |
| (100P) | 76-44-8 | heptachlor | |
| (101P) | 1024-57-3 | heptachlor epoxide | |
| (102P) | 319-84-6 | α-BHC | |
| (103P) | 319-85-7 | β-BHC | |
| (104P) | 319-86-8 | δ-BHC | |
| (105P) | 58-89-9 | γ-BHC (lindane) | |
| (106P) | 53469-21-9 | PCB-1242 | N/A |
| (107P) | 11097-69-1 | PCB-1254 | |
| (108P) | 11104-28-2 | PCB-1221 | |
| (109P) | 11141-16-5 | PCB-1232 | |
| (110P) | 12672-29-6 | PCB-1248 | |
| (111P) | 11096-82-5 | PCB-1260 | |
| (112P) | 12674-11-2 | PCB-1016 | |
| (113P) | 8001-35-2 | toxaphene | |

### DIOXINS N/A

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED:
DATE ANALYZED:
PERCENT MOISTURE:
CONC./DILUTION FACTOR:

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (129B) | 1746-01-6 | 2,3,7,8-tetrachlorodibenzo-p-dioxin | |

December 1983

Environmental Protection Agency. CLP Sample Management Office.
P O Box 818. Alexandria, Virginia 22313 703 7 2490

| Sample Number |
|---|
| DISCHARGE |

003
STATION 12
8-14-85

Table 7.A. Continued

# Organics Analysis Data Sheet
(Page 4)

## Tentatively Identified Compounds

| CAS Number | Compound Name | Fraction | RT or Scan Number | Estimated Concentration (ug/l or ug/kg) |
|---|---|---|---|---|
| 1. | ETHYLDIMETHYLBENZENE | A/B/N | 10.95 | 16.5 |
| 2. | TRIMETHYLCYCLOPENTEN-1-ONE | " | 11.92 | 26.8 |
| 3. | DECAHYDROTRIMETHYLMETHYLENE-1,4- | " | 18.83 | 34.9 |
| 4. | METHANOAZULENE $C_{15}H_{24}$ | | | |
| 5. | 1,4-DIMETHOXYANTHRACENE | " | 28.85 | 340 |
| 6. | ISOPIMARIC ACID | " | 31.27 | 57.1 |
| 7. | PIMARIC ACID | " | 31.72 | 500 |
| 8. | DEHYDROABIETIC ACID | " | 32.87 | 1030 |
| 9. | ERGOST-5-EN-3-OL $C_{28}H_{48}O$ | " | 41.98 | 345 |
| 10. | STIGMAST-5-EN-3-OL $C_{29}H_{50}O$ | " | 43.75 | 1130 |
| 11. | | | | |
| 12. | | | | |
| 13. | | | | |
| 14. | | | | |
| 15. | | | | |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

Table 7.A. Continued

PROJECT: CHAMPION INTERNATIONAL

DATE: 12-11-84

SUBSTRATE: AQUEOUS

SPIKE LEVEL: CLARK FORK (CONTROL) 50 μg/l

DISCHARGE 003 500 μg/l

(% RECOVERY)

| GC/MS FILE | SAMPLE | D6-PHENOL | 2-FLUORO PHENOL | D10-PYRENE | 2-FLUORO BIPHENYL | D5-NITRO[illegible] |
|---|---|---|---|---|---|---|
| 9178 | CLARK FORK (CONTROL) | +40.6 | 55.6 | 105 | 72.4 | 72.0 |
| 9179 | DISCHARGE 003 | 58.6 | 58.6 | 104 | 82.2 | 68.6 |
| | | | | | | |
| [illegible]USUM | $\bar{P}$ | 65.8 | 75.6 | 95.6 | 80.1 | 83.7 |
| [illegible]ATA | S.D. | 9.7 | 11.8 | 8.3 | 10.[illegible] | 10.6 |
| BASE | $\bar{P} \pm 2$ SD | 46.4-85.2 | 52.1-99.2 | 79.0-112 | 59.5-101 | 62.4-10[illegible] |
| | $\bar{P} \pm 3$ SD | 36.6-95.0 | 40.4-111 | 70.7-121 | 49.1-111 | 51.8-116 |
| | # OF DATA POINTS | 49 | 49 | 49 | 49 | 49 |

+ = OUTSIDE THE 95% CONFIDENCE LIMITS, BUT WITHIN THE 99% LIMITS.

Table 7.B. Results of Organic* Analysis of Clark Fork River and Champion Wastewater Samples, Winter 1985

Environmental Protection Agency CLP Sample Management Office
P O Box 818 Alexandria Virginia 22313 703/557-2490

Sample Number
STATION 11

# Organics Analysis Data Sheet
## (Page 1)

Laboratory Name EPA Region VIII MONTANA

Lab Sample ID No [illegible] Bridge

Sample Matrix Water

Data Release Authorized By [illegible]

Case No

QC Report No

Contract No

Date Sample Received

DATE COLLECTED: 2-21-85

### Volatile Compounds

Concentration Low Medium (Circle One)

Date Extracted/Prepared

Date Analyzed 3-15-85

Conc/Dil Factor pH

Percent Moisture

Percent Moisture (Decanted)

| CAS Number | | ug/l or ug/Kg (Circle One) |
|---|---|---|
| 74 87 3 | Chloromethane | <4 |
| 74-83 9 | Bromomethane | |
| 75 01-4 | Vinyl Chloride | |
| 75-00 3 | Chloroethane | |
| 75 09 2 | Methylene Chloride | |
| 67-64-1 | Acetone | NA |
| 75 15 0 | Carbon Disulfide | <4 |
| 75 35-4 | 1 1-Dichloroethene | |
| 75-34 3 | 1 1-Dichloroethane | |
| 156 60 5 | Trans 1 2-Dichloroethene | |
| 67-66 3 | Chloroform | |
| 107-06 2 | 1 2-Dichloroethane | |
| 78 93 3 | 2 Butanone | |
| 71-55-6 | 1 1 1-Trichloroethane | |
| 56-23 5 | Carbon Tetrachloride | |
| 108-05-4 | Viny[illegible] etate | |
| 75 27-4 | Bromodichloromethane | |

| CAS Number | | ug/l or ug/Kg (Circle One) |
|---|---|---|
| 79 34 5 | 1 1 2 2 Tetrachloroethane | <4 |
| 78 87 5 | 1 2-Dichloropropane | |
| 10061 02 6 | Trans 1 3 Dichloropropene | |
| 79 01-6 | Trichloroethene | |
| 124 48 1 | Dibromochloromethane | |
| 79 00 5 | 1 1 2 Trichloroethane | |
| 71-43 2 | Benzene | |
| 10061-01-5 | cis 1 3 Dichloropropene | |
| 110-75-8 | 2-Chloroethylvinylether | NA |
| 75 25 2 | Bromoform | <4 |
| 591-78 6 | 2-Hexanone | |
| 108 10 1 | 4-Methyl-2-Pentanone | |
| 127-18 4 | Tetrachloroethene | |
| 108 88 3 | Toluene | |
| 108 90 7 | Chlorobenzene | |
| 100 41-4 | Ethylbenzene | |
| 100 42 5 | Styrene | |
| | Total Xylenes | |

Data Reporting Qualifiers

For reporting results to EPA the following results qualifiers are used Additional flags or footnotes explaining results are encouraged However the definition of each flag must be explicit

Value If the result is a value greater than or equal to the detection limit report the value

U Indicates compound was analyzed for but not detected Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration dilution actions (This is not necessarily the instrument detection limit ) The footnote should read U Compound was analyzed for but not detected The number is the minimum attainable detection limit for the sample

J Indicates an estimated value This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but [illegible] 10 [illegible]

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS Single component pesticides ≥10 ng ul in the final extract should be confirmed by GC MS

B This flag is used when the analyte is found in the blank as well as a sample It indicates possible probable blank contamination and warns the data user to take appropriate action

Other Other specific flags and footnotes may be required to properly define the results If used they must be fully described and such description attached to the data summary report



*Note: Volatile Compounds Not Analyzed

Table 7.B. Continued

C. GC/MS ANALYSIS DATA SHEET - Page 3

Sample Number
STATION [illegible]
2-21-85

EPA REGION VIII Case No:

Blank - Harpers Bridge Tro.

B. Tentatively Identified Compounds

| CAS No. | Compound Name | Fraction | Scan No. or Retention Time | % Maximum Score Attained Mass Matching Routine: (Specify: ) | Estimated Concentration (ug/L or ug/kg) |
|---|---|---|---|---|---|
| 6921 | NONANE, 3,7-DIMETHYL | | 333 | 915 | [illegible] |

6/83

...ironmental Protection Agency  CLP Sample Management Office
O Box 818  Alexandria Virginia 22313 703/557-2490

| Sample Number |
|---|
| STATION 12 |

# Organics Analysis Data Sheet
(Page 1)

...boratory Name [illegible]  Case No ______
...ab Sample ID No Montana Champion Valley Mall  QC Report No ______
...ample Matrix Water 003 Discharge  Contract No ______
...ata Release Authorized By Joan K Piankart  Date Sample Received ______
DATE COLLECTED 2/21/85

## Volatile Compounds

Concentration **Low** Medium (Circle One)
Date Extracted/Prepared ______
Date Analyzed ______
Conc/Dil Factor ______ pH ______
Percent Moisture ______
Percent Moisture (Decanted) ______

| CAS Number | | ug/l or ug/Kg (Circle One) |
|---|---|---|
| 74-87-3 | Chloromethane | <4 |
| 74-83-9 | Bromomethane | |
| 75-01-4 | Vinyl Chloride | |
| 75-00-3 | Chloroethane | |
| 75-09-2 | Methylene Chloride | |
| 67-64-1 | Acetone | NA |
| 75-15-0 | Carbon Disulfide | <4 |
| 75-35-4 | 1, 1-Dichloroethene | |
| 75-34-3 | 1, 1-Dichloroethane | |
| 156-60-5 | Trans-1, 2-Dichloroethene | |
| 67-66-3 | Chloroform | |
| 107-06-2 | 1, 2-Dichloroethane | |
| 78-93-3 | 2-Butanone | |
| 71-55-6 | 1, 1, 1-Trichloroethane | |
| 56-23-5 | Carbon Tetrachloride | |
| 108-05-4 | Vinyl Acetate | |
| 75-27-4 | Bromodichloromethane | |

| CAS Number | | ug/l or ug/Kg (Circle One) |
|---|---|---|
| 79-34-5 | 1, 1, 2, 2-Tetrachloroethane | <4 |
| 78-87-5 | 1, 2-Dichloropropane | |
| 10061-02-6 | Trans-1, 3-Dichloropropene | |
| 79-01-6 | Trichloroethene | |
| 124-48-1 | Dibromochloromethane | |
| 79-00-5 | 1, 1, 2-Trichloroethane | |
| 71-43-2 | Benzene | |
| 10061-01-5 | cis-1, 3-Dichloropropene | |
| 110-75-8 | 2-Chloroethylvinylether | NA |
| 75-25-2 | Bromoform | <4 |
| 591-78-6 | 2-Hexanone | |
| 108-10-1 | 4-Methyl-2-Pentanone | |
| 127-18-4 | Tetrachloroethene | |
| 108-88-3 | Toluene | |
| 108-90-7 | Chlorobenzene | |
| 100-41-4 | Ethylbenzene | |
| 100-42-5 | Styrene | |
| | Total Xylenes | |

### Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

**Value** If the result is a value greater than or equal to the detection limit, report the value.

**U** Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g., 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

**J** Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but

**C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract should be confirmed by GC/MS.

**B** This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

**Other** Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

C. GC/MS ANALYSIS DATA SHEET - Page 3

STATION 12

Case No:

B. Tentatively Identified Compounds

| CAS # | Compound Name | Fraction | Scan No. or Retention Time | Maximum Score Attained Mass Matching Routine: (Specify: ) | Estimated Conc. (ug/L or ug/kg) |
| --- | --- | --- | --- | --- | --- |
| [illegible] | 1-Butanol | | 320 | 923 | [illegible] |
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PROJECT Champion Paper Montana

DATE March 19, 1985

Table 7.B. Continued

SUBSTRATE Water

SPIKE LEVEL 20 mg/liter

| Sample | BROMOCHLORO-METHANE | 1,4-DICHLORO-BUTANE | | |
|---|---|---|---|---|
| Sample | 102.0 | 90.5 | | |
| Blank | 107.5 | 95.5 | | |
| | | | | |
| | | | | |
| | | | | |
| Mean | 106.7 | 105.3 | | |
| S STD DEV | 9.7 | 10.8 | | |
| $\bar{x} \pm 2xs$ | 87.3-126.0 | 83.7-126.8 | | |
| $\bar{x} \pm 3xs$ | 71.7-135.7 | 72.4-137.6 | | |
| No of data points | 118 | 118 | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Table 7.C. Results of Organic* Analysis of Clark Fork River Champion Wastewater Samples, Spring 1985.

STATION 11

FRN 9362

CLARK FORK RIVER

5-17-85

**ORGANICS ANALYSIS DATA SHEET**

| | | | |
|---|---|---|---|
| Laboratory Name: | USEPA REGION 8 | Case No: | — |
| Lab Sample ID No: | SILVER BOW | QC Report No: | |
| Sample Matrix: | AQUEOUS | Contract No.: | |
| Data Release Authorized By: | A. CURTIS | Date Sample Received: | 5-17-85 |

**SEMIVOLATILE COMPOUNDS**

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-29-85
DATE ANALYZED: 6-7-85
PERCENT MOISTURE: —
CONC/DILUTION FACTOR: 1000

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (21A) | 88-06-2 | 2,4,6- trichlorophenol | <2 |
| (22A) | 59-50-7 | p-chloro-m-cresol | |
| (24A) | 95-57-8 | 2- chlorophenol | |
| (31A) | 120-83-2 | 2,4-dichlorophenol | |
| (34A) | 105-67-9 | 2,4-dimethylphenol | |
| (57A) | 88-75-5 | 2- nitrophenol | |
| (58A) | 100-02-7 | 4-nitrophenol | |
| (59A) | 51-28-5 | 2,4-dinitrophenol | |
| (60A) | 534-52-1 | 4,6-dinitro-2-methylphenol | |
| (64A) | 87-86-5 | pentachlorophenol | |
| (65A) | 108-95-2 | phenol | |
| | 65-85-0 | benzoic acid | |
| | 95-48-7 | 2-methylphenol | |
| | 108-39-4 | 4-methylphenol | |
| | 95-95-4 | 2,4,5-trichlorophenol | |
| (1B) | 83-32-9 | acenaphthene | |
| (5B) | 92-87-5 | benzidine | |
| (8B) | 120-82-1 | 1,2,4-trichlorobenzene | |
| (9B) | 118-74-1 | hexachlorobenzene | |
| (12B) | 67-72-1 | hexachloroethane | |
| (18B) | 111-44-4 | bis(2-chloroethyl)ether | |
| (20B) | 91-58-7 | 2-chloronaphthalene | |
| (25B) | 95-50-1 | 1,2-dichlorobenzene | |
| (26B) | 541-73-1 | 1,3-dichlorobenzene | |
| (27B) | 106-46-7 | 1,4-dichlorobenzene | |
| (28B) | 91-94-1 | 3,3'-dichlorobenzidine | |
| (35B) | 121-14-2 | 2,4-dinitrotoluene | |
| (36B) | 606-20-2 | 2,6-dinitrotoluene | |
| (37B) | 122-66-7 | 1,2-diphenylhydrazine | |
| (39B) | 206-44-0 | fluoranthene | |
| (40B) | 7005-72-3 | 4-chlorophenyl phenyl ether | |
| (41B) | 101-55-3 | 4-bromophenyl phenyl ether | |
| (42B) | 39638-32-9 | bis (2-chloroisopropyl) ether | |
| (43B) | 111-91-1 | bis (2-chloroethoxy) methane | |

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (52B) | 87-68-3 | hexachlorobutadiene | <2 |
| (53B) | 77-47-4 | hexachlorocyclopentadiene | |
| (54B) | 78-59-1 | isophorone | |
| (55B) | 91-20-3 | naphthalene | |
| (56B) | 98-95-3 | nitrobenzene | |
| (61B) | 62-75-9 | N-nitrosodimethylamine | |
| (62B) | 86-30-6 | N-nitrosodiphenylamine | |
| (63B) | 621-64-7 | N-nitrosodipropylamine | |
| (66B) | 117-81-7 | bis (2-ethylhexyl) phthalate | |
| (67B) | 85-68-7 | benzyl butyl phthalate | |
| (68B) | 84-74-2 | di-n-butyl phthalate | |
| (69B) | 117-84-0 | di-n-octyl phthalate | |
| (70B) | 84-66-2 | diethyl phthalate | |
| (71B) | 131-11-3 | dimethyl phthalate | 2.0 |
| (72B) | 56-55-3 | benzo(a)anthracene | <2 |
| (73B) | 50-32-8 | benzo(a)pyrene | |
| (74B) | 205-99-2 | benzo(b)fluoranthene | |
| (75B) | 207-08-9 | benzo(k)fluoranthene | |
| (76B) | 218-01-9 | chrysene | |
| (77B) | 208-96-8 | acenaphthylene | |
| (78B) | 120-12-7 | anthracene | |
| (79B) | 191-24-2 | benzo(ghi)perylene | |
| (80B) | 86-73-7 | fluorene | |
| (81B) | 85-01-8 | phenanthrene | |
| (82B) | 53-70-3 | dibenzo(a,h)anthracene | |
| (83B) | 193-39-5 | indeno(1,2,3-cd)pyrene | |
| (84B) | 129-00-0 | pyrene | |
| | 62-53-3 | aniline | |
| | 100-51-6 | benzyl alcohol | |
| | 106-47-8 | 4-chloroaniline | |
| | 132-64-9 | dibenzofuran | |
| | 91-57-6 | 2-methylnaphthalene | |
| | 88-74-4 | 2-nitroaniline | |
| | 99-09-2 | 3-nitroaniline | |
| | 100-01-6 | 4-nitroaniline | |

1983

*Note: Volatile Compounds Not Analyzed

STATION
11

Environmental Protection Agency, CLP Sample Management Office,
P. O. Box 818, Alexandria, Virginia 22313 703/557-2490

FRN 9362

| Sample Number |
|---|
| CLARK FORK RIVER |

5-17-85

**Organics Analysis Data Sheet**
**(Page 3)**

**Pesticide/PCBs**

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5-29-85

Date Analyzed: 6-7-85

Conc/Dil Factor: 1000

| CAS Number | | ug/l or ug/Kg (Circle One) |
|---|---|---|
| 319-84-6 | Alpha-BHC | <2 |
| 319-85-7 | Beta-BHC | |
| 319-86-8 | Delta-BHC | |
| 58-89-9 | Gamma-BHC (Lindane) | |
| 76-44-8 | Heptachlor | |
| 309-00-2 | Aldrin | |
| 1024-57-3 | Heptachlor Epoxide | |
| 959-98-8 | Endosulfan I | |
| 60-57-1 | Dieldrin | |
| 72-55-9 | 4, 4'-DDE | |
| 72-20-8 | Endrin | |
| 33213-65-9 | Endosulfan II | |
| 72-54-8 | 4, 4'-DDD | |
| 7421-93-4 | Endrin Aldehyde | |
| 1031-07-8 | Endosulfan Sulfate | |
| 50-29-3 | 4, 4'-DDT | |
| 72-43-5 | Methoxychlor | |
| 53494-70-5 | Endrin Ketone | |
| 57-74-9 | Chlordane | |
| 8001-35-2 | Toxaphene | N/A |
| 12674-11-2 | Aroclor-1016 | |
| 11104-28-2 | Aroclor-1221 | |
| 11141-16-5 | Aroclor-1232 | |
| 53469-21-9 | Aroclor-1242 | |
| 12672-29-6 | Aroclor-1248 | |
| 11097-69-1 | Aroclor-1254 | |
| 11096-82-5 | Aroclor-1260 | |

$V_i$ = Volume of extract injected (ul)

$V_s$ = Volume of water extracted (ml)

$W_s$ = Weight of sample extracted (g)

$V_t$ = Volume of total extract (ul)

$V_s$ ____________ or $W_s$ ____________ $V_t$ ____________ $V_i$ ____________

Form I 4/84

Form I. (continued).

Table 7.C. Continued

STATION 12

FRN 9371

Sample Number: CHAMPION WAST 5-17-8

**ORGANICS ANALYSIS DATA SHEET**

Laboratory Name: USEPA REGION 8 — Case No: —

Lab Sample ID No:  — QC Report No:

Sample Matrix: AQUEOUS — Contract No.:

Data Release Authorized By: A. CURTIS — Date Sample Received: 5-18-85

**SEMIVOLATILE COMPOUNDS**

CONCENTRATION: LOW MEDIUM HIGH (circle one)

DATE EXTRACTED/PREPARED: 5-29-85

DATE ANALYZED: 6-10-85

PERCENT MOISTURE: —

CONC/DILUTION FACTOR: 200

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (21A) | 88-06-2 | 2,4,6- trichlorophenol | <10 |
| (22A) | 59-50-7 | p-chloro-m-cresol | |
| (24A) | 95-57-8 | 2- chlorophenol | |
| (31A) | 120-83-2 | 2,4-dichlorophenol | |
| (34A) | 105-67-9 | 2,4-dimethylphenol | |
| (57A) | 88-75-5 | 2- nitrophenol | |
| (58A) | 100-02-7 | 4-nitrophenol | |
| (59A) | 51-28-5 | 2,4-dinitrophenol | |
| (60A) | 534-52-1 | 4,6-dinitro-2-methylphenol | |
| (64A) | 87-86-5 | pentachlorophenol | |
| (65A) | 108-95-2 | phenol | |
| | 65-85-0 | benzoic acid | |
| | 95-48-7 | 2-methylphenol | |
| | 108-39-4 | 4-methylphenol | |
| | 95-95-4 | 2,4,5-trichlorophenol | |
| (1B) | 83-32-9 | acenaphthene | |
| (5B) | 92-87-5 | benzidine | |
| (8B) | 120-82-1 | 1,2,4-trichlorobenzene | |
| (9B) | 118-74-1 | hexachlorobenzene | |
| (12B) | 67-72-1 | hexachloroethane | |
| (18B) | 111-44-4 | bis(2-chloroethyl)ether | |
| (20B) | 91-58-7 | 2-chloronaphthalene | |
| (25B) | 95-50-1 | 1,2-dichlorobenzene | |
| (26B) | 541-73-1 | 1,3-dichlorobenzene | |
| (27B) | 106-46-7 | 1,4-dichlorobenzene | |
| (28B) | 91-94-1 | 3,3'-dichlorobenzidine | |
| (35B) | 121-14-2 | 2,4-dinitrotoluene | |
| (36B) | 606-20-2 | 2,6-dinitrotoluene | |
| (37B) | 122-66-7 | 1,2-diphenylhydrazine | |
| (39B) | 206-44-0 | fluoranthene | |
| (40B) | 7005-72-3 | 4-chlorophenyl phenyl ether | |
| (41B) | 101-55-3 | 4-bromophenyl phenyl ether | |
| (42B) | 39638-32-9 | bis (2-chloroisopropyl) ether | |
| (43B) | 111-91-1 | bis (2-chloroethoxy) methane | |

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (52B) | 87-68-3 | hexachlorobutadiene | <10 |
| (53B) | 77-47-4 | hexachlorocyclopentadiene | |
| (54B) | 78-59-1 | isophorone | |
| (55B) | 91-20-3 | naphthalene | |
| (56B) | 98-95-3 | nitrobenzene | |
| (61B) | 62-75-9 | N-nitrosodimethylamine | |
| (62B) | 86-30-6 | N-nitrosodiphenylamine | |
| (63B) | 621-64-7 | N-nitrosodipropylamine | |
| (66B) | 117-81-7 | bis (2-ethylhexyl) phthalate | |
| (67B) | 85-68-7 | benzyl butyl phthalate | |
| (68B) | 84-74-2 | di-n-butyl phthalate | |
| (69B) | 117-84-0 | di-n-octyl phthalate | |
| (70B) | 84-66-2 | diethyl phthalate | |
| (71B) | 131-11-3 | dimethyl phthalate | |
| (72B) | 56-55-3 | benzo(a)anthracene | |
| (73B) | 50-32-8 | benzo(a)pyrene | |
| (74B) | 205-99-2 | benzo(b)fluoranthene | |
| (75B) | 207-08-9 | benzo(k)fluoranthene | |
| (76B) | 218-01-9 | chrysene | |
| (77B) | 208-96-8 | acenaphthylene | |
| (78B) | 120-12-7 | anthracene | |
| (79B) | 191-24-2 | benzo(ghi)perylene | |
| (80B) | 86-73-7 | fluorene | |
| (81B) | 85-01-8 | phenanthrene | |
| (82B) | 53-70-3 | dibenzo(a,h)anthracene | |
| (83B) | 193-39-5 | indeno(1,2,3-cd)pyrene | |
| (84B) | 129-00-0 | pyrene | |
| | 62-53-3 | aniline | |
| | 100-51-6 | benzyl alcohol | |
| | 106-47-8 | 4-chloroaniline | |
| | 132-64-9 | dibenzofuran | |
| | 91-57-6 | 2-methylnaphthalene | |
| | 88-74-4 | 2-nitroaniline | |
| | 99-09-2 | 3-nitroaniline | |
| | 100-01-6 | 4-nitroaniline | |

1983

Table 7.C. Continued

FRN 9371

STATION 12

Environmental Protection Agency. CLP Sample Management Office.
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

| Sample Number |
|---|
| CHAMPION WASTE |

5-17-85

## Organics Analysis Data Sheet
(Page 3)

### Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5-29-85

Date Analyzed: 6-10-85

Conc/Dil Factor: 200

| CAS Number | | ug/l or ug/Kg (Circle One) |
|---|---|---|
| 319-84-6 | Alpha-BHC | <10 |
| 319-85-7 | Beta-BHC | |
| 319-86-8 | Delta-BHC | |
| 58-89-9 | Gamma-BHC (Lindane) | |
| 76-44-8 | Heptachlor | |
| 309-00-2 | Aldrin | |
| 1024-57-3 | Heptachlor Epoxide | |
| 959-98-8 | Endosulfan I | |
| 60-57-1 | Dieldrin | |
| 72-55-9 | 4, 4'-DDE | |
| 72-20-8 | Endrin | |
| 33213-65-9 | Endosulfan II | |
| 72-54-8 | 4, 4'-DDD | |
| 7421-93-4 | Endrin Aldehyde | |
| 1031-07-8 | Endosulfan Sulfate | |
| 50-29-3 | 4, 4'-DDT | |
| 72-43-5 | Methoxychlor | |
| 53494-70-5 | Endrin Ketone | |
| 57-74-9 | Chlordane | |
| 8001-35-2 | Toxaphene | N/A |
| 12674-11-2 | Aroclor-1016 | |
| 11104-28-2 | Aroclor-1221 | |
| 11141-16-5 | Aroclor-1232 | |
| 53469-21-9 | Aroclor-1242 | |
| 12672-29-6 | Aroclor-1248 | |
| 11097-69-1 | Aroclor-1254 | |
| 11096-82-5 | Aroclor-1260 | |

$V_i$ = Volume of extract injected (ul)

$V_s$ = Volume of water extracted (ml)

$W_s$ = Weight of sample extracted (g)

$V_t$ = Volume of total extract (ul)

$V_s$ ________ or $W_s$ ________ $V_t$ ________ $V_i$ ________

Form I 4/84

Form I. (continued).

Environmental Protection Agency, CLP Sample Management Office,
P O Box 818, Alexandria, Virginia 22313 703/557-2490

FRN 9371

Sample Number: CHAMPION WASTE
5-17-85
STATION 12

Table 7.C. Continued

# Organics Analysis Data Sheet
(Page 4)

## Tentatively Identified Compounds

| CAS Number | Compound Name | Fraction | RT or Scan Number | Estimated Concentration (ug/l or ug/kg) |
|---|---|---|---|---|
| 1. | 1[2-(2-METHOXY-1-METHYLETHOXY)-1- | A/B/N | 16.53 | 480 |
| ~~2.~~ | METHYLETHOXY]-2-PROPANOL $C_{10}H_{22}O_4$ | | | |
| ~~3.~~ 2 | ISOMER OF #1 | | 16.90 | 145 |
| ~~4.~~ 3 | METHYLPENTADECANOIC ACID | | 26.82 | 188 |
| ~~5.~~ 4 | ANDROST-16-EN-3-ONE | | 26.98 | 99.5 |
| ~~6.~~ 5 | 1-EICOSENE $C_{20}H_{40}$ MW 280 | | 30.73 | 164 |
| ~~7.~~ 6 | ISOPIMARIC ACID MW 302 | | 31.30 | 216 |
| ~~8.~~ 7 | PIMARIC ACID MW 302 | | 31.77 | 804 |
| ~~9.~~ 8 | SIMILAR TO PIMARIC ACID MW 302 | | 32.52 | 1050 |
| ~~10.~~ 9 | DEHYDROABIETIC ACID MW 300 | | 32.97 | 1120 |
| ~~11.~~ 10 | 15-HYDROXY-ANDROST-4-ENE-3,17-DIONE | | 33.42 | 538 |
| ~~12.~~ 11 | UNKNOWN ACID MW 340 | | 33.75 | 336 |
| ~~13.~~ 12 | 1-TETRACOSANOL $C_{24}H_{50}O$ | | 34.95 | 171 |
| ~~14.~~ 13 | ERGOST-5-EN-3-OL $C_{28}H_{48}O$ MW 400 | | 41.92 | 243 |
| ~~15.~~ 14 | STIGMAST-5-EN-3-OL $C_{29}H_{50}O$ MW 414 | | 43.65 | 847 |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
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| 26. | | | | |
| 27. | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

NATURAL ACIDS, KETONES AND ALCOHOLS.

STATION
11

FRN 9366

Sample Number
CLARK FORK RIVER
5-31-85

## ORGANICS ANALYSIS DATA SHEET

Laboratory Name: USEPA REGION 8
Lab Sample ID No: SILVER BOW
Sample Matrix: AQUEOUS
Data Release Authorized By: A. CURTIS

Case No: —
QC Report No:
Contract No.:
Date Sample Received: 5-31-85

### SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 6-5-85
DATE ANALYZED: 6-7-85
PERCENT MOISTURE: —
CONC./DILUTION FACTOR: 1000

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (21A) | 88-06-2 | 2,4,6- trichlorophenol | <2 |
| (22A) | 59-50-7 | p-chloro-m-cresol | |
| (24A) | 95-57-8 | 2- chlorophenol | |
| (31A) | 120-83-2 | 2,4-dichlorophenol | |
| (34A) | 105-67-9 | 2,4-dimethylphenol | |
| (57A) | 88-75-5 | 2- nitrophenol | |
| (58A) | 100-02-7 | 4-nitrophenol | |
| (59A) | 51-28-5 | 2,4-dinitrophenol | |
| (60A) | 534-52-1 | 4,6-dinitro-2-methylphenol | |
| (64A) | 87-86-5 | pentachlorophenol | |
| (65A) | 108-95-2 | phenol | |
| | 65-85-0 | benzoic acid | |
| | 95-48-7 | 2-methylphenol | |
| | 108-39-4 | 4-methylphenol | |
| | 95-95-4 | 2,4,5-trichlorophenol | |
| (1B) | 83-32-9 | acenaphthene | |
| (5B) | 92-87-5 | benzidine | |
| (8B) | 120-82-1 | 1,2,4-trichlorobenzene | |
| (9B) | 118-74-1 | hexachlorobenzene | |
| (12B) | 67-72-1 | hexachloroethane | |
| (18B) | 111-44-4 | bis(2-chloroethyl)ether | |
| (20B) | 91-58-7 | 2-chloronaphthalene | |
| (25B) | 95-50-1 | 1,2-dichlorobenzene | |
| (26B) | 541-73-1 | 1,3-dichlorobenzene | |
| (27B) | 106-46-7 | 1,4-dichlorobenzene | |
| (28B) | 91-94-1 | 3,3'-dichlorobenzidine | |
| (35B) | 121-14-2 | 2,4-dinitrotoluene | |
| (36B) | 606-20-2 | 2,6-dinitrotoluene | |
| (37B) | 122-66-7 | 1,2-diphenylhydrazine | |
| (39B) | 206-44-0 | fluoranthene | |
| (40B) | 7005-72-3 | 4-chlorophenyl phenyl ether | |
| (41B) | 101-55-3 | 4-bromophenyl phenyl ether | |
| (42B) | 39638-32-9 | bis (2-chloroisopropyl) ether | |
| (43B) | 111-91-1 | bis (2-chloroethoxy) methane | |

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (52B) | 87-68-3 | hexachlorobutadiene | <2 |
| (53B) | 77-47-4 | hexachlorocyclopentadiene | |
| (54B) | 78-59-1 | isophorone | |
| (55B) | 91-20-3 | naphthalene | |
| (56B) | 98-95-3 | nitrobenzene | |
| (61B) | 62-75-9 | N-nitrosodimethylamine | |
| (62B) | 86-30-6 | N-nitrosodiphenylamine | |
| (63B) | 621-64-7 | N-nitrosodipropylamine | |
| (66B) | 117-81-7 | bis (2-ethylhexyl) phthalate | |
| (67B) | 85-68-7 | benzyl butyl phthalate | |
| (68B) | 84-74-2 | di-n-butyl phthalate | |
| (69B) | 117-84-0 | di-n-octyl phthalate | |
| (70B) | 84-66-2 | diethyl phthalate | |
| (71B) | 131-11-3 | dimethyl phthalate | |
| (72B) | 56-55-3 | benzo(a)anthracene | |
| (73B) | 50-32-8 | benzo(a)pyrene | |
| (74B) | 205-99-2 | benzo(b)fluoranthene | |
| (75B) | 207-08-9 | benzo(k)fluoranthene | |
| (76B) | 218-01-9 | chrysene | |
| (77B) | 208-96-8 | acenaphthylene | |
| (78B) | 120-12-7 | anthracene | |
| (79B) | 191-24-2 | benzo(ghi)perylene | |
| (80B) | 86-73-7 | fluorene | |
| (81B) | 85-01-8 | phenanthrene | |
| (82B) | 53-70-3 | dibenzo(a,h)anthracene | |
| (83B) | 193-39-5 | indeno(1,2,3-cd)pyrene | |
| (84B) | 129-00-0 | pyrene | |
| | 62-53-3 | aniline | |
| | 100-51-6 | benzyl alcohol | |
| | 106-47-8 | 4-chloroaniline | |
| | 132-64-9 | dibenzofuran | |
| | 91-57-6 | 2-methylnaphthalene | |
| | 88-74-4 | 2-nitroaniline | |
| | 99-09-2 | 3-nitroaniline | |
| | 100-01-6 | 4-nitroaniline | |

1983

Table 7.C. Continued

STATION
11

FRN 9366

Environmental Protection Agency CLP Sample Management Office
P O Box 818, Alexandria Virginia 22313 703/557-2490

| Sample Number |
|---|
| CLARK FORK RIVER |

5-31-85

## Organics Analysis Data Sheet
(Page 3)

### Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 6-5-85

Date Analyzed 6-7-85

Conc/Dil Factor 1000

| CAS Number | | ug/l or ug/Kg (Circle One) |
|---|---|---|
| 319-84-6 | Alpha-BHC | <2 |
| 319-85-7 | Beta-BHC | |
| 319-86-8 | Delta-BHC | |
| 58-89-9 | Gamma-BHC (Lindane) | |
| 76-44-8 | Heptachlor | |
| 309-00-2 | Aldrin | |
| 1024-57-3 | Heptachlor Epoxide | |
| 959-98-8 | Endosulfan I | |
| 60-57-1 | Dieldrin | |
| 72-55-9 | 4,4'-DDE | |
| 72-20-8 | Endrin | |
| 33213-65-9 | Endosulfan II | |
| 72-54-8 | 4,4'-DDD | |
| 7421-93-4 | Endrin Aldehyde | |
| 1031-07-8 | Endosulfan Sulfate | |
| 50-29-3 | 4,4'-DDT | |
| 72-43-5 | Methoxychlor | |
| 53494-70-5 | Endrin Ketone | |
| 57-74-9 | Chlordane | |
| 8001-35-2 | Toxaphene | N/A |
| 12674-11-2 | Aroclor-1016 | |
| 11104-28-2 | Aroclor-1221 | |
| 11141-16-5 | Aroclor-1232 | |
| 53469-21-9 | Aroclor-1242 | |
| 12672-29-6 | Aroclor-1248 | |
| 11097-69-1 | Aroclor-1254 | |
| 11096-82-5 | Aroclor-1260 | |

$V_i$ = Volume of extract injected (ul)

$V_s$ = Volume of water extracted (ml)

$W_s$ = Weight of sample extracted (g)

$V_t$ = Volume of total extract (ul)

$V_s$ ________ or $W_s$ ________ $V_t$ ________ $V_i$ ________

Form 1 4/84

Form I. (continued).

Table 7.C. Continued

STATION
12

FRN 9372

Sample Number
CHAMPION WASTE
5-31-85

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: USEPA REGION 8
Lab Sample ID No: SILVER BOW
Sample Matrix: AQUEOUS
Data Release Authorized By: A. CURTIS

Case No: —
QC Report No:
Contract No.:
Date Sample Received: 5-31-85

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 6-5-85
DATE ANALYZED: 6-10-85
PERCENT MOISTURE: —
CONC./DILUTION FACTOR: 200

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (21A) | 88-06-2 | 2,4,6- trichlorophenol | <2 |
| (22A) | 59-50-7 | p-chloro-m-cresol | |
| (24A) | 95-57-8 | 2- chlorophenol | |
| (31A) | 120-83-2 | 2,4-dichlorophenol | |
| (34A) | 105-67-9 | 2,4-dimethylphenol | |
| (57A) | 88-75-5 | 2- nitrophenol | |
| (58A) | 100-02-7 | 4-nitrophenol | |
| (59A) | 51-28-5 | 2,4-dinitrophenol | |
| (60A) | 534-52-1 | 4,6-dinitro-2-methylphenol | |
| (64A) | 87-86-5 | pentachlorophenol | |
| (65A) | 108-95-2 | phenol | |
| | 65-85-0 | benzoic acid | |
| | 95-48-7 | 2-methylphenol | |
| | 108-39-4 | 4-methylphenol | |
| | 95-95-4 | 2,4,5-trichlorophenol | |
| (1B) | 83-32-9 | acenaphthene | |
| (5B) | 92-87-5 | benzidine | |
| (8B) | 120-82-1 | 1,2,4-trichlorobenzene | |
| (9B) | 118-74-1 | hexachlorobenzene | |
| (12B) | 67-72-1 | hexachloroethane | |
| (18B) | 111-44-4 | bis(2-chloroethyl)ether | |
| (20B) | 91-58-7 | 2-chloronaphthalene | |
| (25B) | 95-50-1 | 1,2-dichlorobenzene | |
| (26B) | 541-73-1 | 1,3-dichlorobenzene | |
| (27B) | 106-46-7 | 1,4-dichlorobenzene | |
| (28B) | 91-94-1 | 3,3'-dichlorobenzidine | |
| (35B) | 121-14-2 | 2,4-dinitrotoluene | |
| (36B) | 606-20-2 | 2,6-dinitrotoluene | |
| (37B) | 122-66-7 | 1,2-diphenylhydrazine | |
| (39B) | 206-44-0 | fluoranthene | |
| (40B) | 7005-72-3 | 4-chlorophenyl phenyl ether | |
| (41B) | 101-55-3 | 4-bromophenyl phenyl ether | |
| (42B) | 39638-32-9 | bis (2-chloroisopropyl) ether | |
| (43B) | 111-91-1 | bis (2-chloroethoxy) methane | ↓ |

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (52B) | 87-68-3 | hexachlorobutadiene | <2 |
| (53B) | 77-47-4 | hexachlorocyclopentadiene | |
| (54B) | 78-59-1 | isophorone | |
| (55B) | 91-20-3 | naphthalene | |
| (56B) | 98-95-3 | nitrobenzene | |
| (61B) | 62-75-9 | N-nitrosodimethylamine | |
| (62B) | 86-30-6 | N-nitrosodiphenylamine | |
| (63B) | 621-64-7 | N-nitrosodipropylamine | |
| (66B) | 117-81-7 | bis (2-ethylhexyl) phthalate | |
| (67B) | 85-68-7 | benzyl butyl phthalate | |
| (68B) | 84-74-2 | di-n-butyl phthalate | |
| (69B) | 117-84-0 | di-n-octyl phthalate | |
| (70B) | 84-66-2 | diethyl phthalate | |
| (71B) | 131-11-3 | dimethyl phthalate | |
| (72B) | 56-55-3 | benzo(a)anthracene | |
| (73B) | 50-32-8 | benzo(a)pyrene | |
| (74B) | 205-99-2 | benzo(b)fluoranthene | |
| (75B) | 207-08-9 | benzo(k)fluoranthene | |
| (76B) | 218-01-9 | chrysene | |
| (77B) | 208-96-8 | acenaphthylene | |
| (78B) | 120-12-7 | anthracene | |
| (79B) | 191-24-2 | benzo(ghi)perylene | |
| (80B) | 86-73-7 | fluorene | |
| (81B) | 85-01-8 | phenanthrene | |
| (82B) | 53-70-3 | dibenzo(a,h)anthracene | |
| (83B) | 193-39-5 | indeno(1,2,3-cd)pyrene | |
| (84B) | 129-00-0 | pyrene | |
| | 62-53-3 | aniline | |
| | 100-51-6 | benzyl alcohol | |
| | 106-47-8 | 4-chloroaniline | |
| | 132-64-9 | dibenzofuran | |
| | 91-57-6 | 2-methylnaphthalene | |
| | 88-74-4 | 2-nitroaniline | |
| | 99-09-2 | 3-nitroaniline | |
| | 100-01-6 | 4-nitroaniline | ↓ |

1983

STATION
12

Environmental Protection Agency. CLP Sample Management Office. FRN 9372
P. O. Box 818. Alexandria, Virginia 22313 703/557-2490

| Sample Number |
|---|
| CHAMPION |

WASTE

5-31-85

## Organics Analysis Data Sheet
(Page 3)

### Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 6-5-85

Date Analyzed: 6-10-85

Conc/Dil Factor: 200

| CAS Number | | ug/l or ug/Kg (Circle One) |
|---|---|---|
| 319-84-6 | Alpha-BHC | < 2 |
| 319-85-7 | Beta-BHC | |
| 319-86-8 | Delta-BHC | |
| 58-89-9 | Gamma-BHC (Lindane) | |
| 76-44-8 | Heptachlor | |
| 309-00-2 | Aldrin | |
| 1024-57-3 | Heptachlor Epoxide | |
| 959-98-8 | Endosulfan I | |
| 60-57-1 | Dieldrin | |
| 72-55-9 | 4, 4'-DDE | |
| 72-20-8 | Endrin | |
| 33213-65-9 | Endosulfan II | |
| 72-54-8 | 4, 4'-DDD | |
| 7421-93-4 | Endrin Aldehyde | |
| 1031-07-8 | Endosulfan Sulfate | |
| 50-29-3 | 4, 4'-DDT | |
| 72-43-5 | Methoxychlor | |
| 53494-70-5 | Endrin Ketone | |
| 57-74-9 | Chlordane | |
| 8001-35-2 | Toxaphene | N/A |
| 12674-11-2 | Aroclor-1016 | |
| 11104-28-2 | Aroclor-1221 | |
| 11141-16-5 | Aroclor-1232 | |
| 53469-21-9 | Aroclor-1242 | |
| 12672-29-6 | Aroclor-1248 | |
| 11097-69-1 | Aroclor-1254 | |
| 11096-82-5 | Aroclor-1260 | |

$V_i$ = Volume of extract injected (ul)

$V_s$ = Volume of water extracted (ml)

$W_s$ = Weight of sample extracted (g)

$V_t$ = Volume of total extract (ul)

$V_s$ ______ or $W_s$ ______ $V_t$ ______ $V_i$ ______

Form I 4 84

Form I. (continued).

Environmental Protection Agency CLP Sample Management Office.
P O Box 818, Alexandria Virginia 22313 703/557 2490

FRN 9372

Sample Number
CHAMPION WASTE
5-31-85
STATION
12

Table 7.C. Continued

# Organics Analysis Data Sheet
(Page 4)

## Tentatively Identified Compounds

| CAS Number | Compound Name | Fraction | RT or Scan Number | Estimated Concentration (ug/l or ug/kg) |
|---|---|---|---|---|
| 1. | 1-[2-(2-METHOXY-1-METHYLETHOXY)- | A/B/N | 16.58 | 547 |
| 2. | 1-METHYLETHOXY]-2-PROPANOL $C_{10}H_{22}O_4$ | | | |
| 3. | ISOMER OF #1 | | 16.93 | 190 |
| 4. | METHYLPENTADECANOIC ACID | | 26.78 | 116 |
| 5. | ANDROST-16-EN-3-ONE | | 26.98 | 62.6 |
| 6. | 1-EICOSENE $C_{20}H_{40}$ MW 280 | | 30.68 | 94.6 |
| 7. | ISOPIMARIC ACID MW 302 | | 31.22 | 155 |
| 8. | PIMARIC ACID MW 302 | | 31.65 | 375 |
| 9. | SIMILAR TO PIMARIC ACID MW 302 | | 32.37 | 570 |
| 10. | DEHYDROABIETIC ACID MW 300 | | 32.83 | 905 |
| 11. | 15-HYDROXY-ANDROST-4-ENE-3,17-DIONE | | 33.28 | 240 |
| 12. | UNKNOWN ACID MW 340 | | 33.65 | 285 |
| 13. | 1-TETRACOSANOL $C_{24}H_{50}O$ | | 34.90 | 160 |
| 14. | ERGOST-5-EN-3-OL $C_{28}H_{48}O$ MW 400 | | 41.88 | 194 |
| 15. | STIGMAST-5-EN-3-OL $C_{29}H_{50}O$ MW 414 | | 43.57 | 695 |
| 16. | | | | |
| 17. | | | | |
| 18. | | | | |
| 19. | | | | |
| 20. | | | | |
| 21. | | | | |
| 22. | | | | |
| 23. | | | | |
| 24. | | | | |
| 25. | | | | |
| 26 | | | | |
| 27 | | | | |
| 28. | | | | |
| 29. | | | | |
| 30. | | | | |

NATURAL ACIDS, KETONES + ALCOHOLS.

FRN 9358

| Sample Number |
|---|
| LAB BLANK |

ORGANICS ANALYSIS DATA SHEET

Laboratory Name: USEPA REGION 8
Lab Sample ID No: SILVER BOW LAB BLANK
Sample Matrix: AQUEOUS
Data Release Authorized By: A. CURTIS

Case No: —
QC Report No:
Contract No.:
Date Sample Received: —

SEMIVOLATILE COMPOUNDS

CONCENTRATION: LOW MEDIUM HIGH (circle one)
DATE EXTRACTED/PREPARED: 5-30-85
DATE ANALYZED: 6-6-85
PERCENT MOISTURE: —
CONC./DILUTION FACTOR: 1000

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (21A) | 88-06-2 | 2,4,6- trichlorophenol | < 2 |
| (22A) | 59-50-7 | p-chloro-m-cresol | |
| (24A) | 95-57-8 | 2- chlorophenol | |
| (31A) | 120-83-2 | 2,4-dichlorophenol | |
| (34A) | 105-67-9 | 2,4-dimethylphenol | |
| (57A) | 88-75-5 | 2- nitrophenol | |
| (58A) | 100-02-7 | 4-nitrophenol | |
| (59A) | 51-28-5 | 2,4-dinitrophenol | |
| (60A) | 534-52-1 | 4,6-dinitro-2-methylphenol | |
| (64A) | 87-86-5 | pentachlorophenol | |
| (65A) | 108-95-2 | phenol | |
| | 65-85-0 | benzoic acid | |
| | 95-48-7 | 2-methylphenol | |
| | 108-39-4 | 4-methylphenol | |
| | 95-95-4 | 2,4,5-trichlorophenol | |
| (1B) | 83-32-9 | acenaphthene | |
| (5B) | 92-87-5 | benzidine | |
| (8B) | 120-82-1 | 1,2,4-trichlorobenzene | |
| (9B) | 118-74-1 | hexachlorobenzene | |
| (12B) | 67-72-1 | hexachloroethane | |
| (18B) | 111-44-4 | bis(2-chloroethyl)ether | |
| (20B) | 91-58-7 | 2-chloronaphthalene | |
| (25B) | 95-50-1 | 1,2-dichlorobenzene | |
| (26B) | 541-73-1 | 1,3-dichlorobenzene | |
| (27B) | 106-46-7 | 1,4-dichlorobenzene | |
| (28B) | 91-94-1 | 3,3'-dichlorobenzidine | |
| (35B) | 121-14-2 | 2,4-dinitrotoluene | |
| (36B) | 606-20-2 | 2,6-dinitrotoluene | |
| (37B) | 122-66-7 | 1,2-diphenylhydrazine | |
| (39B) | 206-44-0 | fluoranthene | |
| (40B) | 7005-72-3 | 4-chlorophenyl phenyl ether | |
| (41B) | 101-55-3 | 4-bromophenyl phenyl ether | |
| (42B) | 39638-32-9 | bis (2-chloroisopropyl) ether | |
| (43B) | 111-91-1 | bis (2-chloroethoxy) methane | |

| PP # | CAS # | | ug/l or ug/kg (circle one) |
|---|---|---|---|
| (52B) | 87-68-3 | hexachlorobutadiene | < 2 |
| (53B) | 77-47-4 | hexachlorocyclopentadiene | |
| (54B) | 78-59-1 | isophorone | |
| (55B) | 91-20-3 | naphthalene | |
| (56B) | 98-95-3 | nitrobenzene | |
| (61B) | 62-75-9 | N-nitrosodimethylamine | |
| (62B) | 86-30-6 | N-nitrosodiphenylamine | |
| (63B) | 621-64-7 | N-nitrosodipropylamine | |
| (66B) | 117-81-7 | bis (2-ethylhexyl) phthalate | |
| (67B) | 85-68-7 | benzyl butyl phthalate | |
| (68B) | 84-74-2 | di-n-butyl phthalate | |
| (69B) | 117-84-0 | di-n-octyl phthalate | |
| (70B) | 84-66-2 | diethyl phthalate | |
| (71B) | 131-11-3 | dimethyl phthalate | |
| (72B) | 56-55-3 | benzo(a)anthracene | |
| (73B) | 50-32-8 | benzo(a)pyrene | |
| (74B) | 205-99-2 | benzo(b)fluoranthene | |
| (75B) | 207-08-9 | benzo(k)fluoranthene | |
| (76B) | 218-01-9 | chrysene | |
| (77B) | 208-96-8 | acenaphthylene | |
| (78B) | 120-12-7 | anthracene | |
| (79B) | 191-24-2 | benzo(ghi)perylene | |
| (80B) | 86-73-7 | fluorene | |
| (81B) | 85-01-8 | phenanthrene | |
| (82B) | 53-70-3 | dibenzo(a,h)anthracene | |
| (83B) | 193-39-5 | indeno(1,2,3-cd)pyrene | |
| (84B) | 129-00-0 | pyrene | |
| | 62-53-3 | aniline | |
| | 100-51-6 | benzyl alcohol | |
| | 106-47-8 | 4-chloroaniline | |
| | 132-64-9 | dibenzofuran | |
| | 91-57-6 | 2-methylnaphthalene | |
| | 88-74-4 | 2-nitroaniline | |
| | 99-09-2 | 3-nitroaniline | |
| | 100-01-6 | 4-nitroaniline | |

'983

Environmental Protection Agency. CLP Sample Management Office.
P O Box 818. Alexandria, Virginia 22313 703/557-2490

FRN 9358

| Sample Number |
|---|
| LAB BLANK |

## Organics Analysis Data Sheet
(Page 3)

### Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 5-30-85

Date Analyzed: 6-6-85

Conc/Dil Factor: 1000

| CAS Number | | ug/l or ug/Kg (Circle One) |
|---|---|---|
| 319-84-6 | Alpha-BHC | < 2 |
| 319-85-7 | Beta-BHC | |
| 319-86-8 | Delta-BHC | |
| 58-89-9 | Gamma-BHC (Lindane) | |
| 76-44-8 | Heptachlor | |
| 309-00-2 | Aldrin | |
| 1024-57-3 | Heptachlor Epoxide | |
| 959-98-8 | Endosulfan I | |
| 60-57-1 | Dieldrin | |
| 72-55-9 | 4, 4'-DDE | |
| 72-20-8 | Endrin | |
| 33213-65-9 | Endosulfan II | |
| 72-54-8 | 4, 4'-DDD | |
| 7421-93-4 | Endrin Aldehyde | |
| 1031-07-8 | Endosulfan Sulfate | |
| 50-29-3 | 4, 4'-DDT | |
| 72-43-5 | Methoxychlor | |
| 53494-70-5 | Endrin Ketone | |
| 57-74-9 | Chlordane | |
| 8001-35-2 | Toxaphene | N/A |
| 12674-11-2 | Aroclor-1016 | |
| 11104-28-2 | Aroclor-1221 | |
| 11141-16-5 | Aroclor-1232 | |
| 53469-21-9 | Aroclor-1242 | |
| 12672-29-6 | Aroclor-1248 | |
| 11097-69-1 | Aroclor-1254 | |
| 11096-82-5 | Aroclor-1260 | |

$V_i$ = Volume of extract injected (ul)

$V_s$ = Volume of water extracted (ml)

$W_s$ = Weight of sample extracted (g)

$V_t$ = Volume of total extract (ul)

$V_s$ ____________ or $W_s$ ____________ $V_t$ ____________ $V_i$ ____________

Form 1 4/84

Form I. (continued).

DATE: 6-25-85

PROJECT: SILVER BOW / CHAMPION

SUBSTRATE: AQUEOUS

SPIKE LEVEL: 50 ug/l

| GC/MS FILE | SAMPLE | 2-FLUORO PHENOL | D6-PHENOL | D5-NITROBENZENE | QUINOXALINE | 2-FLUORO BIPHENYL | D10-PHENANTHREN |
|---|---|---|---|---|---|---|---|
| 9358 | LAB BLANK | 57.6 | 43.2 | 62.8 | 66.6 | 71.0 | 80.2 |
| 9360 | CLARK FORK 5-8-85 | 55.0 | 41.2 | 63.4 | 64.2 | 72.0 | 79.8 |
| 9361 | TAYLOR CREEK 5-31-85 | 53.1 | 37.0 | 59.3 | 86.1 | 75.6 | 90.2 |
| 9362 | CHAMPION RIVER 5-17-85 | 51.4 | 42.1 | 60.0 | 59.0 | 63.1 | 111 |
| 9363 | CHAMPION WELL 5-17-85 | 49.0 | 39.5 | 55.8 | 57.0 | 67.6 | 94.1 |
| 9364 | CLARK FORK 5-22-85 | 51.0 | 38.5 | 66.3 | 67.2 | 74.3 | 98.4 |
| 9365 | TAYLOR CREEK 5-22-85 | 55.1 | 42.5 | 66.7 | 68.5 | 75.2 | 99.9 |
| 9366 | CHAMPION 5-31-85 | 58.7 | 47.0 | 66.7 | 65.0 | 72.2 | 90.8 |
| 9367 | CLARK FORK 5-31-85 | 59.6 | 44.1 | 68.4 | 69.7 | 80.3 | 108 |
| 9368 | TAYLOR CREEK 5-8-85 | 53.1 | 43.8 | 66.5 | 71.5 | 81.2 | 115 |
| 9369 | CLARK FORK WELL 5-31-85 | 54.9 | 40.3 | 59.7 | 56.8 | 67.0 | 99.6 |
| 9371 | CHAMPION WASTE 5-17-85 | 52.9 | 49.2 | 56.8 | 86.4 | 78.5 | 95.8 |
| 9372 | CHAMPION WASTE 5-31-85 | 65.9 | 56.3 | 70.1 | 87.5 | 84.4 | 86.7 |
| 9377 | CLARK FORK 6-6-85 | 72.0 | 59.6 | 83.0 | 83.8 | 85.8 | 97.6 |
| 9378 | TAYLOR CREEK 6-6-85 | 74.8 | 58.8 | 86.4 | 89.2 | 92.6 | 99.2 |
| | | | | | | | |
| 9379 | ELLSWORTH AFB SD0000281-5 | 65.8 | 52.6 | 73.8 | 75.0 | 72.8 | 111 |
| | | | | | | | |
| CUSUM | $\bar{P}$ | 69.8 | 58.9 | 78.5 | 78.6 | 79.2 | 95.5 |
| DATA | S.D. | 12.9 | 12.3 | 12.9 | 11.5 | 10.6 | 10.5 |
| BASE | $\bar{P} \pm 2$ SD | 44.0-95.5 | 34.3-83.5 | 52.6-104 | 55.7-101 | 57.9-101 | 74.6-116 |
| | $\bar{P} \pm 3$ SD | 31.2-108 | 22.0-95.8 | 39.6-117 | 44.2-113 | 47.3-111 | 64.2-127 |
| | # OF DATA POINTS | 92 | 91 | 92 | 92 | 92 | 31 |

ALL RECOVERIES WITHIN 95% CONFIDENCE LIMITS.

2. Deep-water Sampling: Reservoir and River Pool Stations

a. Rationale

Identical water samples were collected at the same time from the surface and near the bottom of the four mainstem impoundments (Milltown, Thompson Falls, Noxon Rapids and Cabinet Gorge Reservoirs) and from up to 11 deepwater pools between Frenchtown and Thompson Falls. This type of sampling was designed to determine whether dissolved oxygen and pH are depressed near the bottom of deepwater areas and whether such depressions result in a mobilization (solution) of heavy metals that may be contained in the bottom sediments.

b. Methods

Top and bottom water samples for metals and dissolved oxygen analysis were collected from the four reservoirs and several river pools on a seasonal basis (spring, summer, fall). The reservoirs were sampled a total of five times; however, river pool sampling was discontinued after two runs.

Water was brought up from the bottom using a Kemmerer depth sampler lowered from a boat. The importance of dissolved (and biologically effective) metals in this type of monitoring approach required filtering one set of metals samples in the field.

Sample collection and analysis methods and the analyzing laboratory are summarized in Table 8. Methods for sample preservation and handling are included in Appendix C.

c. Results

Reservoir and river pool water analysis data are listed in Table 9. A statistical summary of the data follows in Table 10. Field notations at the time of sampling are summarized in Appendix C.

Table 8. Sample Collection and Analysis Methods for Chemical/Physical Deep-water Monitoring

| Variable | Collection Method | Analytical Method | Laboratory |
|---|---|---|---|
| Water Temperature (°C) (T(C)) | Kemmerer sample (bottom) | Instream field determination (surface) | Field personnel |
| Hardness (mg/l) as $CaCO_3$ (HARD) | Grab sample (surface) and Kemmerer sample (bottom) | EPA 200.7 [1] | MDHES Chem Lab |
| Total Recoverable and Dissolved Metals (mg/l) | Grab, Kemmerer samples. Dissolved metals sample field filtered (0.45 u) prior to preservation. | | MDHES Chem Lab |
| Iron (FE T.R., FE DISS) | | EPA 200.7 [1] | |
| Copper (CU T.R., CU DISS) | | EPA 200.7 [1] | |
| Zinc (ZN T.R., ZN DISS) | | EPA 200.7 [1] | |
| Manganese (MN T.R., MN DISS) | | EPA 200.7 [1] | |
| Cadmium (CD T.R. CD DISS) | | EPA 200.7 [1] | |
| Arsenic (AS T.R., AS DISS) | | EPA 200.7 [1] (automated) | |
| Chromium (CR T.R., CR DISS) | | EPA 200.7 [1] | |
| Lead (PB T.R., PB DISS) | | EPA 200.7 [1] | |
| Silver (AG T.R., AG DISS) | | EPA 200.7 [1] | |
| pH, Field and Lab (standard pH units) (PH FLD, PH LAB) | Grab, Kemmerer samples. | EPA 351.2 [1] | Field personnel and MDHES Chem Lab |
| Specific Conductance (umhos/cm @ 25°C) (SPEC COND) | Grab, Kemmerer samples. | EPA 120.1 [1] | MDHES Chem Lab |
| Dissolved Oxygen (mg/l) (D.O.) | Grab, Kemmerer samples. | EPA 360.2 [1] | Field personnel |
| Acid Soluble Metals (mg/l) | Grab, Kemmerer samples followed by lab filtration (0.45 u) after 48 hours. | | Energy Labs, Inc. |
| Copper (CU A.S.) | | EPA 220.2 [1] | |
| Zinc (ZN A.S.) | | EPA 289.2 [1] | |
| Cadmium (CD A.S.) | | EPA 213.2 [1] | |
| Lead (PB A.S.) | | EPA 239.2 [1] | |

References

1) "Methods for Chemical Analysis of Water and Wastes," EPA-600/4-79-020 U.S. Environmental Protection Agency, 1983 (Revised).

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON MARCH 5-8, 1984

| | STATION | DAY | TIME | TOTAL DEPTH | T (C) | PH FLD | PH LAB | SPEC COND | D.O. | HARD | FE T.R. | FE DISS | CU T.R. | CU DISS | ZN T.R. | ZN DISS | MN T.R. | MN DISS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 05 | 1401 | 8 | 4.5 | | 8.36 | 391 | 13.6 | 185 | 0.11 | 0.01 | <0.01 | <0.01 | 0.02 | 0.009 | 0.03 | 0.02 |
| 03 | MILLTOWN-B | 05 | 1400 | 8 | | | 8.31 | 397 | 13.3 | 182 | 0.13 | 0.02 | <0.01 | <0.01 | 0.02 | 0.009 | 0.03 | 0.02 |
| 13 | MARCURE-TP | 06 | 1400 | 3 | 5.5 | 7.8 | 8.35 | 282 | 13.3 | 123 | 0.07 | 0.02 | <0.01 | <0.01 | 0.009 | <0.005 | 0.03 | 0.03 |
| 13 | MARCURE-BT | | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | 06 | 1100 | 22 | 4.0 | | 8.23 | 280 | 12.5 | 123 | 0.10 | 0.02 | <0.01 | <0.01 | 0.007 | <0.005 | 0.04 | 0.04 |
| 15 | HUSON-BOT | 06 | 1101 | 22 | | | 8.24 | 282 | 12.1 | 124 | 0.16 | 0.02 | <0.01 | <0.01 | 0.02 | <0.005 | 0.05 | 0.04 |
| 16 | 9MILE-TOP | 06 | 0900 | | 4.0 | | 8.18 | 278 | 11.8 | 122 | 0.10 | 0.02 | <0.01 | <0.01 | <0.02 | <0.005 | 0.04 | 0.03 |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-T | 07 | 1000 | 50 | 4.0 | 7.9 | 8.33 | 276 | 12.2 | 121 | 0.11 | 0.02 | <0.01 | <0.01 | 0.04 | <0.005 | 0.04 | 0.02 |
| 17 | BEL FISH-B | 07 | 1001 | 50 | | 7.7 | 8.26 | 274 | 12.1 | 122 | 0.02 | <0.01 | <0.01 | <0.01 | 0.008 | 0.007 | 0.03 | 0.04 |
| 18 | TARKIO-TOP | 07 | 1200 | 20 | 5.0 | 7.9 | 8.32 | 275 | 12.3 | 121 | 0.12 | 0.02 | <0.01 | <0.01 | 0.008 | 0.01 | 0.04 | 0.03 |
| 18 | TARKIO-BOT | 07 | 1155 | 20 | | 7.9 | 8.33 | 277 | 12.3 | 122 | 0.10 | 0.02 | <0.01 | <0.01 | <0.005 | <0.005 | 0.04 | 0.03 |
| 19.5 | SUPERIOR-T | 07 | 1501 | 27 | | 8.1 | 8.50 | 271 | 13.3 | 122 | 0.10 | 0.01 | <0.01 | <0.01 | 0.02 | <0.005 | 0.05 | 0.02 |
| 19.5 | SUPERIOR-B | 07 | 1500 | 27 | | 8.1 | 8.55 | 272 | 13.3 | 121 | 0.09 | 0.02 | <0.01 | <0.01 | <0.005 | <0.005 | 0.03 | 0.02 |
| 20 | LAVISTA-TP | | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-BT | | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-T | | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-TOP | | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-BOT | | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-TOP | | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-BOT | | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-T | | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-B | | | | | | | | | | | | | | | | | |
| 26 | T FALLS-TP | 08 | 1315 | 17 | 4.0 | 7.8 | 8.35 | 204 | 12.3 | 92 | 0.03 | <0.01 | <0.01 | <0.01 | 0.006 | <0.005 | 0.01 | 0.01 |
| 26 | T FALLS-BT | | | | | | | | | | | | | | | | | |
| 28 | NOXON-TOP | 08 | 1115 | 22 | 4.0 | 7.7 | 8.29 | 187 | 12.3 | 88 | 0.04 | <0.01 | <0.01 | <0.01 | 0.01 | <0.005 | 0.02 | 0.01 |
| 28 | NOXON-BOT | 08 | 1105 | 22 | | 7.8 | 8.32 | 193 | 12.4 | 91 | 0.04 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.02 | 0.01 |
| 30 | CAB GORG-T | 08 | 1700 | 27 | 3.0 | 7.8 | 8.28 | 196 | 12.8 | 91 | 0.02 | 0.01 | <0.01 | <0.01 | <0.005 | 0.008 | 0.01 | 0.006 |
| 30 | CAB GORG-B | 08 | 1701 | 27 | | 7.1 | 8.29 | 192 | 12.8 | 91 | 0.03 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.01 | 0.005 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT DEPTH(FEET), TEMPERATURE(DEG. C), PH(PH UNITS), AND S.C.(UMHOS/CM). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. FIELD PH VALUES ARE QUESTIONABLE FOR THIS RUN.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON MARCH 5-8, 1984

| | STATION | DAY | TIME | CD T.R. | CD DISS | AS T.R. | AS DISS | CR T.R. | CR DISS | PB T.R. | PB DISS | AG T.R. | AG DISS | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 05 | 1401 | 0.005 | <0.005 | 0.005 | 0.005 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 03 | MILLTOWN-B | 05 | 1400 | <0.005 | <0.005 | 0.006 | 0.005 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 13 | MARCURE-TP | 06 | 1400 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 13 | MARCURE-BT | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | 06 | 1100 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 15 | HUSON-BOT | 06 | 1101 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 16 | 9MILE-TOP | 06 | 0900 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-T | 07 | 1000 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 17 | BEL FISH-B | 07 | 1001 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 18 | TARKIO-TOP | 07 | 1200 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 18 | TARKIO-BOT | 07 | 1155 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 19.5 | SUPERIOR-T | 07 | 1501 | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 19.5 | SUPERIOR-B | 07 | 1500 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 20 | LAVISTA-TP | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-BT | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-T | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-TOP | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-BOT | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-TOP | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-BOT | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-T | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-B | | | | | | | | | | | | | | | | |
| 26 | T FALLS-TP | 08 | 1315 | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 26 | T FALLS-BT | | | | | | | | | | | | | | | | |
| 28 | NOXON-TOP | 08 | 1115 | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 28 | NOXON-BOT | 08 | 1105 | <0.005 | <0.005 | <0.001 | <0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 30 | CAB GORG-T | 08 | 1700 | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 30 | CAB GORG-B | 08 | 1701 | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |

NOTE: ALL VALUES ARE IN MG/L. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND A.S. MEANS ACID SOLUBLE.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JULY 23-26, 1984

| | STATION | DAY | TIME | TOTAL DEPTH | T (C) | PH FLD | PH LAB | SPEC COND | D.O. | HARD | FE T.R. | FE DISS | CU T.R. | CU DISS | ZN T.R. | ZN DISS | MN T.R. | MN DISS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 26 | 1110 | 10 | | 8.1 | 7.96 | 320 | 8.2 | 149 | 0.06 | 0.01 | 0.01 | <0.01 | 0.01 | 0.006 | 0.02 | 0.02 |
| 03 | MILLTOWN-B | | | | | | | | | | | | | | | | | |
| 13 | MARCLURE-TP | 23 | 1300 | 5 | 17.5 | 7.9 | 8.05 | 228 | 7.7 | 99 | 0.05 | 0.02 | <0.01 | 0.01 | 0.01 | 0.008 | 0.06 | 0.05 |
| 13 | MARCLURE-BT | | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | 23 | 1000 | 18 | 17. | 8.3 | 8.22 | 231 | 8.7 | 103 | 0.10 | 0.02 | 0.01 | 0.01 | 0.008 | 0.008 | 0.03 | 0.02 |
| 15 | HUSON-BOT | 23 | 1040 | 18 | 17. | 8.4 | 8.27 | 235 | 8.7 | 101 | 0.12 | 0.02 | 0.01 | 0.01 | 0.01 | 0.007 | 0.04 | 0.02 |
| 16 | 9MILE-TOP | 23 | 0830 | 3 | 18. | 7.8 | 8.24 | 226 | 8.0 | 102 | 0.07 | 0.02 | 0.01 | <0.01 | 0.04 | 0.009 | 0.03 | 0.02 |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | | |
| 17 | BELT F SH-T | 24 | 1910 | 45 | 20. | 8.25 | 8.44 | 227 | 9.05 | 102 | 0.06 | 0.02 | 0.01 | 0.01 | <0.005 | <0.005 | 0.02 | 0.01 |
| 17 | BELT F SH-B | 24 | 1915 | 45 | 20. | 8.2 | 8.47 | 223 | 9.0 | 102 | 0.18 | 0.02 | 0.02 | 0.01 | 0.02 | <0.005 | 0.04 | 0.01 |
| 18 | TARKIO-TOP | 24 | 2000 | 10 | 20. | 8.6 | 8.46 | 221 | 9.05 | 102 | 0.08 | 0.02 | 0.01 | <0.01 | 0.005 | <0.005 | 0.02 | 0.01 |
| 18 | TARKIO-BOT | 24 | 2005 | 10 | 20. | 8.6 | 8.42 | 222 | 9.0 | 102 | 0.12 | 0.02 | 0.02 | 0.01 | 0.007 | 0.008 | 0.03 | 0.01 |
| 19.5 | SUPERIOR-T | | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-B | | | | | | | | | | | | | | | | | |
| 20 | LA. STA-TP | 24 | 1650 | 14 | 20. | 8.75 | 8.60 | 215 | 10.1 | 93 | 0.04 | 0.02 | <0.01 | <0.01 | <0.007 | <0.005 | 0.01 | 0.009 |
| 20 | LA. STA-BT | 24 | 1655 | 14 | 20.5 | 8.75 | 8.58 | 214 | 10.0 | 99 | 0.06 | 0.02 | 0.01 | <0.01 | 0.006 | <0.005 | 0.02 | 0.005 |
| 20.5 | RED HILL-T | 24 | 1600 | 6 | 20. | 8.6 | 8.55 | 218 | 9.8 | 100 | 0.06 | 0.01 | <0.01 | <0.01 | 0.04 | <0.005 | 0.02 | 0.008 |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | | |
| 21 | BONCAP-TOP | 24 | 1420 | 21 | 19. | 8.6 | 8.47 | 205 | 9.6 | 93 | 0.06 | 0.02 | 0.01 | 0.02 | 0.09 | 0.006 | 0.03 | 0.005 |
| 21 | BONCAP-BOT | 24 | 1425 | 21 | 19. | 8.55 | 8.45 | 215 | | 101 | 0.05 | 0.01 | <0.01 | <0.01 | 0.007 | 0.007 | 0.01 | 0.005 |
| 21.5 | TOOLE-TOP | 24 | 1330 | 17 | 19.5 | 8.45 | 8.37 | 222 | 8.7 | 100 | 0.06 | 0.04 | 0.01 | 0.02 | 0.02 | 0.008 | 0.02 | 0.05 |
| 21.5 | TOOLE-BOT | 24 | 1335 | 17 | 19.5 | 8.55 | 8.48 | 208 | 8.7 | 94 | 0.08 | 0.02 | 0.02 | 0.01 | 0.01 | 0.006 | 0.02 | 0.01 |
| 22 | AB FHEAD-T | 24 | 1100 | 20 | 18.5 | 8.4 | 8.52 | 210 | 8.6 | 98 | 0.05 | 0.02 | 0.01 | 0.01 | 0.01 | 0.006 | 0.01 | 0.007 |
| 22 | AB FHEAD-B | 24 | 1105 | 20 | 19. | | 8.47 | 217 | 8.5 | 98 | 0.06 | 0.02 | 0.02 | 0.01 | 0.04 | 0.005 | 0.02 | <0.005 |
| 26 | T FALLS-TP | 25 | 0940 | 40 | 21.5 | 8.2 | 8.43 | 185 | 8.3 | 92 | 0.04 | 0.01 | 0.01 | 0.02 | 0.05 | 0.006 | 0.02 | <0.005 |
| 26 | T FALLS-BT | 25 | 0945 | 40 | 21.5 | 8.35 | 8.44 | 189 | 8.4 | 92 | 0.03 | 0.02 | 0.01 | 0.01 | 0.006 | 0.006 | 0.01 | <0.005 |
| 28 | NOXON-TOP | 25 | 1240 | 40 | 23.6 | 8.25 | 8.43 | 185 | 8.4 | 85 | 0.06 | 0.01 | 0.01 | <0.01 | 0.02 | 0.006 | 0.05 | <0.005 |
| 28 | NOXON-BOT | 25 | 1245 | 40 | 20.8 | 8.05 | 8.26 | 186 | 7.1 | 83 | 0.07 | 0.01 | 0.01 | <0.01 | 0.03 | 0.01 | 0.04 | 0.008 |
| 30 | CAB GORG-T | 25 | 1700 | 27 | 21.5 | 8.2 | 8.42 | 167 | 8.6 | 78 | 0.03 | 0.01 | 0.02 | 0.02 | <0.005 | <0.005 | 0.02 | <0.005 |
| 30 | CAB GORG-B | 25 | 1705 | 27 | 21. | 8.2 | 8.34 | 166 | 8.5 | 79 | 0.04 | 0.01 | 0.01 | 0.01 | 0.02 | 0.005 | 0.02 | <0.005 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT DEPTH(FEET), TEMPERATURE(DEG. C), PH(PH UNITS), AND S.C.(UMHOS/CM).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JULY 23-26, 1984

| | STATION | DAY | TIME | CD T.R. | CD DISS | AS T.R. | AS DISS | CR T.R. | CR DISS | PB T.R. | PB DISS | AG T.R. | AG DISS | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 26 | 1110 | <0.005 | <0.005 | 0.006 | 0.006 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 03 | MILLTOWN-B | | | | | | | | | | | | | | | | |
| 13 | MARCURE-TP | 23 | 1300 | <0.005 | <0.005 | 0.003 | 0.003 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 13 | MARCURE-BT | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | 23 | 1000 | <0.005 | <0.005 | 0.003 | 0.003 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 15 | HUSON-BOT | 23 | 1040 | <0.005 | <0.005 | 0.003 | 0.003 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 16 | 9MILE-TOP | 23 | 0830 | <0.005 | <0.005 | 0.003 | 0.004 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-T | 24 | 1910 | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 17 | BEL FISH-B | 24 | 1915 | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 18 | TARKIO-TOP | 24 | 2000 | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 18 | TARKIO-BOT | 24 | 2005 | <0.005 | <0.005 | 0.003 | 0.003 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 19.5 | SUPERIOR-T | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-B | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-TP | 24 | 1650 | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 20 | LAVISTA-BT | 24 | 1655 | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 20.5 | RED HILL-T | 24 | 1600 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-TOP | 24 | 1420 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 21 | BOXCAR-BOT | 24 | 1425 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 21.5 | TOOLE-TOP | 24 | 1330 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 21.5 | TOOLE-BOT | 24 | 1335 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 22 | AB FHEAD-T | 24 | 1100 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 22 | AB FHEAD-B | 24 | 1105 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 26 | T FALLS-TP | 25 | 0940 | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 26 | T FALLS-BT | 25 | 0945 | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 28 | NOXON-TOP | 25 | 1240 | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 28 | NOXON-BOT | 25 | 1245 | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 30 | CAB GORG-T | 25 | 1700 | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 30 | CAB GORG-B | 25 | 1705 | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |

NOTE: ALL VALUES ARE IN MG/L. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND A.S. MEANS ACID SOLUBLE.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON OCT 25-26, 1984

| | STATION | DAY | TIME | TOTAL DEPTH | T (C) | PH FLD | PH LAB | SPEC COND | D.O. | HARD | FE T.R. | FE DISS | CU T.R. | CU DISS | ZN T.R. | ZN DISS | MN T.R. | MN DISS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 25 | 1000 | 9 | 5. | 8.2 | 8.26 | 379 | 10.3 | 184 | [illegible] | 0.02 | <0.01 | <0.01 | 0.02 | 0.02 | 0.04 | 0.01 |
| 03 | MILLTOWN-B | 25 | 1005 | 9 | | 8.2 | 8.26 | 381 | 10.6 | | 0.15 | 0.02 | 0.01 | <0.01 | 0.10 | 0.02 | 0.07 | 0.01 |
| 13 | MARCURE-TP | | | | | | | | | | | | | | | | | |
| 13 | MARCURE-BT | | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | | | | | | | | | | | | | | | | | |
| 15 | HUSON-BOT | | | | | | | | | | | | | | | | | |
| 16 | 9MILE-TOP | | | | | | | | | | | | | | | | | |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-T | | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-B | | | | | | | | | | | | | | | | | |
| 18 | TARKIO-TOP | | | | | | | | | | | | | | | | | |
| 18 | TARKIO-BOT | | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-T | | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-B | | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-TP | | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-BT | | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-T | | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-TOP | | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-BOT | | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-TOP | | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-BOT | | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-T | | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-B | | | | | | | | | | | | | | | | | |
| 26 | T FALLS-TP | 26 | 1220 | 28 | 7. | 8.2 | 8.42 | 195 | 11.2 | 100 | 0.04 | 0.02 | <0.01 | <0.01 | 0.12 | 0.08 | 0.02 | 0.01 |
| 26 | T FALLS-BT | 26 | 1225 | 28 | 7. | 8.2 | 8.41 | 199 | 11.1 | 100 | 0.04 | 0.01 | <0.01 | <0.01 | 0.03 | 0.008 | 0.02 | 0.008 |
| 28 | NOXON-TOP | 25 | 0300 | 48 | 6. | 8.1 | 8.45 | 200 | 11.4 | 103 | 0.04 | 0.02 | <0.01 | <0.01 | 0.005 | 0.01 | 0.02 | 0.02 |
| 28 | NOXON-BOT | 25 | 0305 | 48 | | 8.1 | 8.40 | 200 | 11.4 | 101 | 0.04 | 0.02 | <0.01 | <0.01 | <0.005 | 0.05 | 0.01 | 0.05 |
| 30 | CAB GORG-T | 26 | 0940 | 29 | 9. | 8.1 | 8.32 | 196 | 9.75 | 36 | 0.04 | 0.01 | <0.01 | <0.01 | <0.005 | 0.04 | 0.01 | <0.005 |
| 30 | CAB GORG-B | 26 | 0945 | 29 | | 8.1 | 8.31 | 188 | 10.0 | 96 | 0.36 | 0.02 | <0.01 | <0.01 | 0.01 | 0.006 | 0.08 | <0.005 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT DEPTH(FEET), TEMPERATURE(DEG. C), PH(PH UNITS), AND S.C.(UMHOS/CM).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON OCT 25-26, 1984

| | STATION | DAY | TIME | CD T.R. | CD DISS | AS T.R. | AS DISS | CR T.R. | CR DISS | PB T.R. | PB DISS | AG T.R. | AG DISS | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 25 | 1000 | <0.005 | <0.005 | 0.005 | 0.005 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 03 | MILLTOWN-B | 25 | 1005 | <0.005 | | 0.006 | 0.005 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 13 | MARCURE-TP | | | | | | | | | | | | | | | | |
| 13 | MARCURE-BT | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | | | | | | | | | | | | | | | | |
| 15 | HUSON-BOT | | | | | | | | | | | | | | | | |
| 16 | 9MILE-TOP | | | | | | | | | | | | | | | | |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-T | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-B | | | | | | | | | | | | | | | | |
| 18 | TARKIO-TOP | | | | | | | | | | | | | | | | |
| 18 | TARKIO-BOT | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-T | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-B | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-TP | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-BT | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-T | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-TOP | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-BOT | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-TOP | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-BOT | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-T | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-B | | | | | | | | | | | | | | | | |
| 26 | T FALLS-TP | 26 | 1220 | <0.005 | <0.005 | <0.001 | <0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 26 | T FALLS-BT | 26 | 1225 | <0.005 | <0.005 | <0.001 | <0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 28 | NOXON-TOP | 25 | 0300 | <0.005 | <0.005 | <0.001 | <0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 28 | NOXON-BOT | 25 | 0305 | <0.005 | <0.005 | <0.001 | <0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 30 | CAB GORG-T | 26 | 0940 | <0.005 | <0.005 | 0.001 | <0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| 30 | CAB GORG-B | 26 | 0945 | <0.005 | <0.005 | 0.001 | <0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |

NOTE: ALL VALUES ARE IN MG/L. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND A.S. MEANS ACID SOLUBLE.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PAPT I
RESULTS OF SAMPLES TAKEN ON MARCH 25-26, 1985

| | STATION | DAY | TIME | TOTAL DEPTH | T (C) | PH FLD | PH LAB | SPEC COND | D.O. | HARD | FE T.R. | FE DISS | CU T.P. | CU DISS | ZN T.R. | ZN DISS | MN T.R. | MN DISS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 25 | 1130 | | 4.2 | 7.80 | 8.18 | 396 | 12.0 | 174 | 0.19 | | 0.02 | | 0.029 | | 0.06 | |
| 03 | MILLTOWN-B | 25 | 1200 | | | 7.80 | 8.22 | 394 | 12.0 | 174 | 0.18 | | 0.02 | | 0.026 | | 0.06 | |
| 13 | MAPCURE-TP | | | | | | | | | | | | | | | | | |
| 13 | MARCURE-BT | | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | | | | | | | | | | | | | | | | | |
| 15 | HUSON-BOT | | | | | | | | | | | | | | | | | |
| 16 | 9MILE-TOP | | | | | | | | | | | | | | | | | |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-T | | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-B | | | | | | | | | | | | | | | | | |
| 18 | TARKIO-TOP | | | | | | | | | | | | | | | | | |
| 18 | TARKIO-BOT | | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-T | | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-B | | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-TP | | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-BT | | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-T | | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-TOP | | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-BOT | | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-TOP | | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-BOT | | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-T | | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-B | | | | | | | | | | | | | | | | | |
| 26 | T FALLS-TP | 25 | 1630 | | 4.7 | 7.75 | 8.27 | 206 | 11.9 | 94 | 0.06 | | <0.01 | | 0.006 | | 0.02 | |
| 26 | T FALLS-BT | 25 | 1645 | | | 7.75 | 8.29 | 207 | 11.9 | 94 | 0.07 | | <0.01 | | 0.01 | | 0.02 | |
| 28 | NOXON-TOP | 26 | 1330 | | 5.0 | 8.05 | 8.21 | 219 | 11.7 | 95 | 0.08 | | <0.01 | | <0.005 | | 0.02 | |
| 28 | NOXON-BOT | 26 | 1400 | | | 8.05 | 8.19 | 207 | 11.7 | 95 | 0.09 | | <0.01 | | <0.005 | | 0.02 | |
| 30 | CAB GORG-T | 26 | 1015 | | 4.2 | 7.9 | 8.13 | 207 | 11.8 | 96 | 0.07 | | <0.01 | | <0.005 | | 0.02 | |
| 30 | CAB GORG-B | 26 | 1045 | | | 7.9 | 8.13 | 206 | 11.6 | 96 | 0.08 | | <0.01 | | 0.009 | | 0.02 | |

NOTE: ALL VALUES ARE IN MG/L EXCEPT DEPTH(FEET), TEMPERATURE(DEG. C), PH(PH UNITS), AND S.C.(UMHOS/CM).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON MARCH 25-26, 1985

| | STATION | DAY | TIME | CD T.R. | CD DISS | AS T.R. | AS DISS | CR T.R. | CR DISS | PB T.R. | PB DISS | AG T.R. | AG DISS | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 25 | 113[illegible] | <0.005 | | 0.008 | | | | <0.05 | | | | 0.013 | 0.0383 | 0.[illegible] | 0.016 |
| 03 | MILLTOWN-B | 25 | 120[illegible] | <0.005 | | 0.006 | | | | <0.05 | | | | 0.015 | 0.0297 | 0.[illegible]02 | 0.004 |
| 13 | MARCURE-TP | | | | | | | | | | | | | | | | |
| 13 | MARCURE-BT | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | | | | | | | | | | | | | | | | |
| 15 | HUSON-BOT | | | | | | | | | | | | | | | | |
| 16 | 9MILE-TOP | | | | | | | | | | | | | | | | |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-T | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-B | | | | | | | | | | | | | | | | |
| 18 | TARKIO-TOP | | | | | | | | | | | | | | | | |
| 18 | TARKIO-BOT | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-T | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-B | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-TP | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-BT | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-T | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-TOP | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-BOT | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-TOP | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-BOT | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-T | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-B | | | | | | | | | | | | | | | | |
| 26 | T FALLS-TP | 25 | 163[illegible] | <0.005 | | 0.001 | | | | <0.05 | | | | 0.002 | 0.0054 | 0.[illegible]1 | 0.003 |
| 26 | T FALLS-BT | 25 | 1645 | <0.005 | | 0.001 | | | | <0.05 | | | | 0.003 | 0.0086 | 0.[illegible]1 | 0.002 |
| 28 | NOXON-TOP | 26 | 133[illegible] | <0.005 | | 0.001 | | | | <0.05 | | | | 0.011 | 0.0310 | 0.[illegible]7 | 0.204 |
| 28 | NOXON-BOT | 26 | 14[illegible] | <0.005 | | 0.001 | | | | <0.05 | | | | 0.003 | 0.0614 | 0.[illegible]13 | 0.138 |
| 30 | CAB GORG-T | 26 | [illegible] | <0.005 | | <0.001 | | | | <0.05 | | | | 0.00[illegible] | 0.0041 | 0.[illegible]3 | 0.00[illegible] |
| 30 | CAB GORG-B | 26 | [illegible] | <0.005 | | 0.001 | | | | <0.05 | | | | 0.005 | 0.0031 | 0.0001 | 0.074 |

NOTE: ALL VALUES ARE IN MG/L. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND A.S. MEANS ACID SOLUBLE.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JULY 29-30, 1985

| | STATION | DAY | TIME | TOTAL DEPTH | T (C) | PH FLD | PH LAB | SPEC COND | D.O. | HARD | FE T.R. | FE DISS | CU T.R. | CU DISS | ZN T.R. | ZN DISS | MN T.R. | MN DISS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 27 | 1130 | | 17.5 | 7.6 | 8.13 | 310 | 8.0 | 146 | 0.08 | 0.02 | <0.01 | <0.01 | 0.028 | 0.007 | 0.06 | 0.06 |
| 03 | MILLTOWN-B | 29 | 1140 | | 17.0 | 7.5 | 8.16 | 312 | 7.8 | 145 | 0.06 | 0.02 | <0.01 | <0.01 | 0.013 | <0.005 | 0.06 | 0.06 |
| 13 | MARCURE-TP | | | | | | | | | | | | | | | | | |
| 13 | MARCURE-BT | | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | | | | | | | | | | | | | | | | | |
| 15 | HUSON-BOT | | | | | | | | | | | | | | | | | |
| 16 | 9MILE-TOP | | | | | | | | | | | | | | | | | |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-T | | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-B | | | | | | | | | | | | | | | | | |
| 18 | TARKIO-TOP | | | | | | | | | | | | | | | | | |
| 18 | TARKIO-BOT | | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-T | | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-B | | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-TP | | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-BT | | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-T | | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-TOP | | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-BOT | | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-TOP | | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-BOT | | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-T | | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-B | | | | | | | | | | | | | | | | | |
| 26 | T FALLS-TP | 29 | 1655 | | 24.0 | 8.2 | 8.50 | 173 | 8.4 | 87 | 0.02 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.01 | <0.005 |
| 26 | T FALLS-BT | 29 | 1715 | | 23.0 | 8.3 | 8.45 | 173 | 8.5 | 87 | 0.03 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.01 | <0.005 |
| 28 | NOXON-TOP | 30 | 1120 | | 23.5 | 8.1 | 8.49 | 170 | 8.5 | 85 | 0.01 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.007 | <0.005 |
| 28 | NOXON-BOT | 30 | 1145 | | 23.0 | 8.2 | 8.51 | 171 | 7.1 | 85 | 0.02 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.02 | <0.005 |
| 30 | CAB GORG-T | 30 | 0915 | | 21.5 | 7.6 | 8.18 | 169 | 7.1 | 84 | 0.02 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.02 | <0.005 |
| 30 | CAB GORG-B | 30 | 0930 | | 21.5 | 7.6 | 8.08 | 171 | 6.7 | 82 | 0.12 | <0.01 | <0.01 | <0.01 | 0.005 | <0.005 | 0.04 | 0.008 |

NOTE: ALL VALUES ARE IN [illegible] EXCEPT DEPTH(FEET), TEMPERATURE(DEG. C), PH(PH UNITS), AND S.C.(UMHOS/CM).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JULY 29-30,1985

| | STATION | DAY | TIME | CD T.R. | CD DISS | AS T.R. | AS DISS | CR T.R. | CR DISS | PB T.R. | PB DISS | AG T.R. | AG DISS | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | 27 | 1130 | <0.005 | <0.005 | 0.004 | 0.004 | | | <0.05 | <0.05 | | | | | | |
| 03 | MILLTOWN-B | 29 | 1140 | <0.005 | <0.005 | 0.005 | 0.005 | | | <0.05 | <0.05 | | | | | | |
| 13 | MARCURE-TP | | | | | | | | | | | | | | | | |
| 13 | MARCURE-BT | | | | | | | | | | | | | | | | |
| 15 | HUSON-TOP | | | | | | | | | | | | | | | | |
| 15 | HUSON-BOT | | | | | | | | | | | | | | | | |
| 16 | 9MILE-TOP | | | | | | | | | | | | | | | | |
| 16 | 9MILE-BOT | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-T | | | | | | | | | | | | | | | | |
| 17 | BEL FISH-B | | | | | | | | | | | | | | | | |
| 18 | TARKIO-TOP | | | | | | | | | | | | | | | | |
| 18 | TARKIO-BOT | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-T | | | | | | | | | | | | | | | | |
| 19.5 | SUPERIOR-B | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-TP | | | | | | | | | | | | | | | | |
| 20 | LAVISTA-BT | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-T | | | | | | | | | | | | | | | | |
| 20.5 | RED HILL-B | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-TOP | | | | | | | | | | | | | | | | |
| 21 | BOXCAR-BOT | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-TOP | | | | | | | | | | | | | | | | |
| 21.5 | TOOLE-BOT | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-T | | | | | | | | | | | | | | | | |
| 22 | AB FHEAD-B | | | | | | | | | | | | | | | | |
| 26 | T FALLS-TP | 29 | 1655 | <0.005 | <0.005 | <0.001 | <0.001 | | | <0.05 | <0.05 | | | | | | |
| 26 | T FALLS-BT | 29 | 1715 | <0.005 | <0.005 | <0.001 | <0.001 | | | <0.05 | <0.05 | | | | | | |
| 28 | NOXON-TOP | 30 | 1120 | 0.005 | 0.005 | <0.001 | <0.001 | | | <0.05 | <0.05 | | | | | | |
| 28 | NOXON-BOT | 30 | 1145 | <0.005 | <0.005 | <0.001 | <0.001 | | | <0.05 | <0.05 | | | | | | |
| 30 | CAB GORG-T | 30 | 0915 | <0.005 | <0.005 | 0.001 | 0.001 | | | <0.05 | <0.05 | | | | | | |
| 30 | CAB GORG-B | 30 | 0930 | <0.005 | <0.005 | 0.001 | 0.001 | | | <0.05 | <0.05 | | | | | | |

NOTE: ALL VALUES ARE IN MG/L. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND A.S. MEANS A[illegible] SOLUBLE.

TABLE 9

DEEP-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| | STATION | | TOTAL DEPTH | T (C) | PH FLD | PH LAB | SPEC COND | D.O. | MPD | FE T.R. | FE DISS | CU T.R. | CU DISS | ZN T.R. | ZN DISS | MN T.R. | MN DISS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | MAX: | 10 | 17.5 | 8.2 | 8.36 | 396 | 13.6 | 185 | [illegible] | 0.02 | 0.02 | <0.01 | 0.029 | 0.02 | 0.06 | 0.06 |
| | | MIN: | 8 | 4.2 | 7.6 | 7.96 | 310 | 8.0 | 145 | [illegible] | 0.01 | <0.01 | <0.01 | 0.01 | 0.006 | 0.02 | 0.01 |
| | | MEAN: | 9. | 7.8 | 7.92 | 8.18 | 359. | 10.42 | 168. | [illegible] | 0.02 | 0.01 | 0.01 | 0.021 | 0.010 | 0.042 | 0.027 |
| | | N: | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 |
| 03 | MILLTOWN-B | MAX: | 9 | 17.0 | 8.2 | 8.31 | 397 | 13.3 | 182 | [illegible] | 0.02 | 0.02 | <0.01 | 0.10 | 0.02 | 0.07 | 0.06 |
| | | MIN: | 8 | 17.0 | 7.5 | 8.16 | 312 | 7.8 | 145 | [illegible] | 0.02 | <0.01 | <0.01 | 0.013 | <0.005 | 0.03 | 0.01 |
| | | MEAN: | 9. | 17.0 | 7.83 | 8.24 | 371. | 10.92 | 167. | [illegible] | 0.02 | 0.01 | 0.01 | 0.040 | 0.011 | 0.055 | 0.030 |
| | | N: | 2 | 1 | 3 | 4 | 4 | 4 | 3 | [illegible] | 3 | 4 | 3 | 4 | 3 | 4 | 3 |
| 13 | MARCURE-TP | MAX: | 5 | 17.5 | 7.9 | 8.35 | 282 | 13.3 | 123 | [illegible] | 0.02 | <0.01 | <0.01 | 0.01 | 0.008 | 0.06 | 0.05 |
| | | MIN: | 3 | 5.5 | 7.8 | 8.05 | 228 | 7.7 | 99 | [illegible] | 0.02 | <0.01 | <0.01 | 0.009 | <0.005 | 0.03 | 0.03 |
| | | MEAN: | 4. | 11.5 | 7.85 | 8.20 | 255. | 10.50 | 111. | [illegible] | 0.02 | 0.01 | 0.01 | 0.010 | 0.006 | 0.045 | 0.040 |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 13 | MARCURE-BT | MAX: | | | | | | | | | | | | | | | |
| | | MIN: | | | | | | | | | | | | | | | |
| | | MEAN: | 0. | 0.0 | 0.00 | 0.00 | 0. | 0.00 | 0. | [illegible] | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | [illegible] | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | HUSON-TOP | MAX: | 22 | 17. | 8.3 | 8.23 | 280 | 12.5 | 123 | [illegible] | 0.02 | <0.01 | <0.01 | 0.008 | 0.008 | 0.04 | 0.04 |
| | | MIN: | 18 | 4.0 | 8.3 | 8.22 | 231 | 8.7 | 103 | [illegible] | 0.02 | <0.01 | <0.01 | 0.007 | <0.005 | 0.03 | 0.02 |
| | | MEAN: | 20. | 10.5 | 8.30 | 8.22 | 256. | 10.60 | 113. | [illegible] | 0.02 | 0.01 | 0.01 | 0.008 | 0.006 | 0.035 | 0.030 |
| | | N: | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 15 | HUSON-BOT | MAX: | 22 | 17. | 8.4 | 8.27 | 282 | 12.1 | 124 | [illegible] | 0.02 | <0.01 | <0.01 | 0.02 | 0.007 | 0.05 | 0.04 |
| | | MIN: | 18 | 17. | 8.4 | 8.24 | 235 | 8.7 | [illegible] | [illegible] | 0.02 | <0.01 | <0.01 | 0.01 | <0.005 | 0.04 | 0.02 |
| | | MEAN: | 20. | 17.0 | 8.40 | 8.25 | 259. | 10.40 | 113. | [illegible] | 0.02 | 0.01 | 0.01 | 0.015 | 0.006 | 0.045 | 0.030 |
| | | N: | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 16 | 9MILE-TOP | MAX: | 3 | 18. | 7.8 | 8.24 | 278 | 11.8 | 122 | [illegible] | 0.02 | <0.01 | <0.01 | 0.04 | 0.009 | 0.04 | 0.03 |
| | | MIN: | 3 | 4.0 | 7.8 | 8.18 | 226 | 8.0 | 102 | [illegible] | 0.02 | <0.01 | <0.01 | <0.02 | <0.005 | 0.03 | 0.02 |
| | | MEAN: | 3. | 11.0 | 7.80 | 8.21 | 252. | 9.90 | 112. | [illegible] | 0.02 | 0.01 | 0.01 | 0.030 | 0.007 | 0.035 | 0.025 |
| | | N: | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 16 | 9MILE-BOT | MAX: | | | | | | | | | | | | | | | |
| | | MIN: | | | | | | | | | | | | | | | |
| | | MEAN: | 0. | 0.0 | 0.00 | 0.00 | 0. | 0.00 | 0. | [illegible] | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| | | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | [illegible] | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT DEPTH(FEET), TEMPERATURE(DEG. C), PH(PH UNITS), AND S.C.(UMHOS/CM).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. SOME FIELD PH VALUES ARE QUESTIONABLE.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 10

DEEP-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| | STATION | | CD T.R. | CD DISS | AS T.R. | AS DISS | CR T.R. | CR DISS | PB T.R. | PB DISS | AG T.R. | AG DISS | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN-T | MAX: | 0.005 | <0.005 | 0.008 | 0.006 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.013 | 0.0383 | 0.0009 | 0.01[illegible] |
| | | MIN: | 0.005 | <0.005 | 0.004 | 0.004 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.013 | 0.0383 | 0.0009 | 0.01[illegible] |
| | | MEAN: | 0.005 | 0.005 | 0.006 | 0.005 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0130 | 0.0383 | 0.0009 | 0.01[illegible] |
| | | N: | 5 | 4 | 5 | 4 | 3 | 3 | 5 | 4 | 3 | 3 | 1 | 1 | 1 | 1 |
| 03 | MILLTOWN-B | MAX: | <0.005 | <0.005 | 0.006 | 0.005 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.015 | 0.0297 | 0.0002 | 0.00[illegible] |
| | | MIN: | <0.005 | <0.005 | 0.005 | 0.005 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.015 | 0.0297 | 0.0002 | 0.00[illegible] |
| | | MEAN: | 0.005 | 0.005 | 0.006 | 0.005 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0150 | 0.0297 | 0.0002 | 0.00[illegible] |
| | | N: | 4 | 2 | 4 | 3 | 2 | 2 | 4 | 3 | 2 | 2 | 1 | 1 | 1 | 1 |
| 13 | MARCURE-TP | MAX: | <0.005 | <0.005 | 0.003 | 0.003 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0[illegible] |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| 13 | MARCURE-BT | MAX: | | | | | | | | | | | | | | |
| | | MIN: | | | | | | | | | | | | | | |
| | | MEAN: | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.00[illegible] |
| | | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | HUSON-TOP | MAX: | <0.005 | <0.005 | 0.003 | 0.003 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0[illegible] |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| 15 | HUSON-BOT | MAX: | <0.005 | <0.005 | 0.003 | 0.003 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0[illegible] |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| 16 | 9MILE-TOP | MAX: | <0.005 | <0.005 | 0.003 | 0.004 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | | MEAN: | 0.005 | 0.005 | 0.002 | 0.003 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0[illegible] |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | [illegible] |
| 16 | 9MILE-BOT | MAX: | | | | | | | | | | | | | | |
| | | MIN: | | | | | | | | | | | | | | |
| | | MEAN: | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.[illegible] |
| | | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | [illegible] |

NOTE: ALL VALUES ARE IN MG/L. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND A.S. MEANS ACID SOLUBLE.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 10

DEEP-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| | STATION | | TOTAL DEPTH | T (C) | PH FLD | PH LAB | SPEC COND | D.O. | HPD | FE T.R. | FE DISS | CU T.R. | CU DISS | ZN T.R. | ZN DISS | MN T.R. | MN DISS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | BEL FISH-T | MAX: | 50 | 20. | 8.25 | 8.44 | 276 | 12.2 | 121 | 0.11 | 0.02 | <0.01 | <0.01 | 0.04 | <0.005 | 0.04 | 0.02 |
| | | MIN: | 45 | 4.0 | 7.9 | 8.33 | 227 | 9.05 | 102 | 0.06 | 0.02 | <0.01 | <0.01 | <0.005 | <0.005 | 0.02 | 0.01 |
| | | MEAN: | 48. | 12.0 | 8.07 | 8.38 | 252. | 10.63 | 112. | 0.08 | 0.02 | 0.01 | 0.01 | 0.022 | 0.005 | 0.030 | 0.015 |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 17 | BEL FISH-B | MAX: | 50 | 20. | 8.2 | 8.47 | 274 | 12.1 | 122 | 0.18 | 0.02 | 0.02 | <0.01 | 0.02 | 0.007 | 0.04 | 0.04 |
| | | MIN: | 45 | 20. | 7.7 | 8.26 | 223 | 9.0 | 102 | 0.02 | <0.01 | <0.01 | <0.01 | 0.008 | <0.005 | 0.03 | 0.01 |
| | | MEAN: | 48. | 20.0 | 7.95 | 8.36 | 249. | 10.55 | 112. | 0.10 | 0.02 | 0.02 | 0.01 | 0.014 | 0.006 | 0.035 | 0.025 |
| | | N: | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 18 | TARKIO-TOP | MAX: | 20 | 20. | 8.6 | 8.46 | 275 | 12.3 | 121 | 0.12 | 0.02 | <0.01 | <0.01 | 0.008 | 0.01 | 0.04 | 0.03 |
| | | MIN: | 10 | 5.0 | 7.9 | 8.32 | 221 | 9.05 | 102 | 0.08 | 0.02 | <0.01 | <0.01 | 0.005 | <0.005 | 0.02 | 0.01 |
| | | MEAN: | 15. | 12.5 | 8.25 | 8.39 | 248. | 10.67 | 112. | 0.10 | 0.02 | 0.01 | 0.01 | 0.006 | 0.008 | 0.030 | 0.020 |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 18 | TARKIO-BOT | MAX: | 20 | 20. | 8.6 | 8.42 | 277 | 12.3 | 122 | 0.12 | 0.02 | 0.02 | <0.01 | 0.007 | 0.008 | 0.04 | 0.03 |
| | | MIN: | 10 | 20. | 7.9 | 8.33 | 222 | 9.0 | 102 | 0.10 | 0.02 | <0.01 | <0.01 | <0.005 | <0.005 | 0.03 | 0.01 |
| | | MEAN: | 15. | 20.0 | 8.25 | 8.38 | 250. | 10.65 | 112. | 0.11 | 0.02 | 0.02 | 0.01 | 0.006 | 0.006 | 0.035 | 0.020 |
| | | N: | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 19.5 | SUPERIOR-T | MAX: | 27 | | 8.1 | 8.50 | 271 | 13.3 | 122 | 0.10 | 0.01 | <0.01 | <0.01 | 0.02 | <0.005 | 0.05 | 0.02 |
| | | MIN: | 27 | | 8.1 | 8.50 | 271 | 13.3 | 122 | 0.10 | 0.01 | <0.01 | <0.01 | 0.02 | <0.005 | 0.05 | 0.02 |
| | | MEAN: | 27. | 0.0 | 8.10 | 8.50 | 271. | 13.30 | 122. | 0.10 | 0.01 | 0.01 | 0.01 | 0.020 | 0.005 | 0.050 | 0.020 |
| | | N: | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 19.5 | SUPERIOR-B | MAX: | 27 | | 8.1 | 8.55 | 272 | 13.3 | 121 | 0.09 | 0.02 | <0.01 | <0.01 | <0.005 | <0.005 | 0.03 | 0.02 |
| | | MIN: | 27 | | 8.1 | 8.55 | 272 | 13.3 | 121 | 0.09 | 0.02 | <0.01 | <0.01 | <0.005 | <0.005 | 0.03 | 0.02 |
| | | MEAN: | 27. | 0.0 | 8.10 | 8.55 | 272. | 13.30 | 121. | 0.09 | 0.02 | 0.01 | 0.01 | 0.005 | 0.005 | 0.030 | 0.020 |
| | | N: | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | LAVISTA-TP | MAX: | 14 | 20. | 8.75 | 8.60 | 215 | 10.1 | 93 | 0.04 | 0.02 | <0.01 | <0.01 | <0.007 | <0.005 | 0.01 | 0.009 |
| | | MIN: | 14 | 20. | 8.75 | 8.60 | 215 | 10.1 | 93 | 0.04 | 0.02 | <0.01 | <0.01 | <0.007 | <0.005 | 0.01 | 0.009 |
| | | MEAN: | 14. | 20.0 | 8.75 | 8.60 | 215. | 10.10 | 93. | 0.04 | 0.02 | 0.01 | 0.01 | 0.007 | 0.005 | 0.010 | 0.009 |
| | | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 | LAVISTA-BT | MAX: | 14 | 20.5 | 8.75 | 8.58 | 214 | 10.0 | 99 | 0.06 | 0.02 | 0.01 | <0.01 | 0.006 | <0.005 | 0.02 | 0.005 |
| | | MIN: | 14 | 20.5 | 8.75 | 8.58 | 214 | 10.0 | 99 | 0.06 | 0.02 | 0.01 | <0.01 | 0.006 | <0.005 | 0.02 | 0.005 |
| | | MEAN: | 14. | 20.5 | 8.75 | 8.58 | 214. | 10.00 | 99. | 0.06 | 0.02 | 0.01 | 0.01 | 0.006 | 0.005 | 0.020 | 0.005 |
| | | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT DEPTH(FEET), TEMPERATURE(DEG. C), PH(PH UNITS), AND S.C.(UMHOS/CM).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. SOME FIELD PH VALUES ARE QUESTIONABLE.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 10

DEEP-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| STATION | | CD T.R. | CD DISS | AS T.R. | AS DISS | CR T.R. | CR DISS | PB T.R. | PB DISS | AG T.R. | AG DISS | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 BEL FISH-T | MAX: | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| 17 BEL FISH-B | MAX: | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| 18 TARKIO-TOP | MAX: | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| 18 TARKIO-BOT | MAX: | <0.005 | <0.005 | 0.003 | 0.003 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 0 | 0 | 0 |
| 19.5 SUPERIOR-T | MAX: | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.003 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 19.5 SUPERIOR-B | MAX: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 20 LAVISTA-TP | MAX: | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.003 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 20 LAVISTA-BT | MAX: | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.003 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.003 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |

NOTE: ALL VALUES ARE IN MG/L. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND A.S. MEANS ACID SOLUBLE.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 10

DEEP-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| STATION | | TOTAL DEPTH | T (C) | PH FLD | PH LAB | SPEC COND | D.O. | HRD | FE T.R. | FE DISS | CU T.R. | CU DISS | ZN T.R. | ZN DISS | MN T.R. | MN DISS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20.5 RED HILL-T | MAX: | 6 | 20. | 8.6 | 8.55 | 218 | 9.8 | 100 | 0.06 | 0.01 | <0.01 | <0.01 | 0.04 | <0.005 | 0.02 | 0.008 |
| | MIN: | 6 | 20. | 8.6 | 8.55 | 218 | 9.8 | 100 | 0.06 | 0.01 | <0.01 | <0.01 | 0.04 | <0.005 | 0.02 | 0.008 |
| | MEAN: | 6. | 20.0 | 8.60 | 8.55 | 218. | 9.80 | 100. | 0.06 | 0.01 | 0.01 | 0.01 | 0.040 | 0.005 | 0.020 | 0.008 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20.5 RED HILL-B | MAX: | | | | | | | | | | | | | | | |
| | MIN: | | | | | | | | | | | | | | | |
| | MEAN: | 0. | 0.0 | 0.00 | 0.00 | 0. | 0.00 | 0. | 0.00 | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 BOXCAR-TOP | MAX: | 21 | 19. | 8.6 | 8.47 | 205 | 9.6 | 93 | 0.06 | 0.02 | 0.01 | 0.02 | 0.09 | 0.006 | 0.03 | 0.005 |
| | MIN: | 21 | 19. | 8.6 | 8.47 | 205 | 9.6 | 93 | 0.06 | 0.02 | 0.01 | 0.02 | 0.09 | 0.006 | 0.03 | 0.005 |
| | MEAN: | 21. | 19.0 | 8.60 | 8.47 | 205. | 9.60 | 93. | 0.06 | 0.02 | 0.01 | 0.02 | 0.090 | 0.006 | 0.030 | 0.005 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 BOXCAR-BOT | MAX: | 21 | 19. | 8.55 | 8.45 | 215 | | 101 | 0.05 | 0.01 | <0.01 | <0.01 | 0.007 | 0.007 | 0.01 | 0.005 |
| | MIN: | 21 | 19. | 8.55 | 8.45 | 215 | | 101 | 0.05 | 0.01 | <0.01 | <0.01 | 0.007 | 0.007 | 0.01 | 0.005 |
| | MEAN: | 21. | 19.0 | 8.55 | 8.45 | 215. | 0.00 | 101. | 0.05 | 0.01 | 0.01 | 0.01 | 0.007 | 0.007 | 0.010 | 0.005 |
| | N: | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21.5 TOOLE-TOP | MAX: | 17 | 19.5 | 8.45 | 8.37 | 222 | 8.7 | 100 | 0.06 | 0.04 | 0.01 | 0.02 | 0.02 | 0.008 | 0.02 | 0.05 |
| | MIN: | 17 | 19.5 | 8.45 | 8.37 | 222 | 8.7 | 100 | 0.06 | 0.04 | 0.01 | 0.02 | 0.02 | 0.008 | 0.02 | 0.05 |
| | MEAN: | 17. | 19.5 | 8.45 | 8.37 | 222. | 8.70 | 100. | 0.06 | 0.04 | 0.01 | 0.02 | 0.020 | 0.008 | 0.020 | 0.050 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21.5 TOOLE-BOT | MAX: | 17 | 19.5 | 8.55 | 8.48 | 208 | 8.7 | 94 | 0.08 | 0.02 | 0.02 | 0.01 | 0.01 | 0.006 | 0.02 | 0.01 |
| | MIN: | 17 | 19.5 | 8.55 | 8.48 | 208 | 8.7 | 94 | 0.08 | 0.02 | 0.02 | 0.01 | 0.01 | 0.006 | 0.02 | 0.01 |
| | MEAN: | 17. | 19.5 | 8.55 | 8.48 | 208. | 8.70 | 94. | 0.08 | 0.02 | 0.02 | 0.01 | 0.010 | 0.006 | 0.020 | 0.010 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 AB FHEAD-T | MAX: | 20 | 18.5 | 8.4 | 8.52 | 210 | 8.6 | 98 | 0.05 | 0.02 | 0.01 | 0.01 | 0.01 | 0.006 | 0.01 | 0.007 |
| | MIN: | 20 | 18.5 | 8.4 | 8.52 | 210 | 8.6 | 98 | 0.05 | 0.02 | 0.01 | 0.01 | 0.01 | 0.006 | 0.01 | 0.007 |
| | MEAN: | 20. | 18.5 | 8.40 | 8.52 | 210. | 8.60 | 98. | 0.05 | 0.02 | 0.01 | 0.01 | 0.010 | 0.006 | 0.010 | 0.007 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 22 AB FHEAD-B | MAX: | 20 | 19. | | 8.47 | 217 | 8.5 | 98 | 0.06 | 0.02 | 0.02 | 0.01 | 0.04 | 0.005 | 0.02 | <0.005 |
| | MIN: | 20 | 19. | | 8.47 | 217 | 8.5 | 98 | 0.06 | 0.02 | 0.02 | 0.01 | 0.04 | 0.005 | 0.02 | <0.005 |
| | MEAN: | 20. | 19.0 | 0.00 | 8.47 | 217. | 8.50 | 98. | 0.06 | 0.02 | 0.02 | 0.01 | 0.040 | 0.005 | 0.020 | 0.005 |
| | N: | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT DEPTH(FEET), TEMPERATURE(DEG. C), PH(PH UNITS), AND S.C.(UMHOS/CM). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. SOME FIELD PH VALUES ARE QUESTIONABLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 10

DEEP-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| STATION | | CD T.R. | CD DISS | AS T.R. | AS DISS | CR T.R. | CR DISS | PB T.R. | PB DISS | AG T.R. | AG DISS | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20.5 RED HILL-T | MAX: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 20.5 RED HILL-B | MAX: | | | | | | | | | | | | | | |
| | MIN: | | | | | | | | | | | | | | |
| | MEAN: | 0.000 | 0.000 | 0.000 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 BOXCAR-TOP | MAX: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 21 BOXCAR-BOT | MAX: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 21.5 TOOLE-TOP | MAX: | 0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | 0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 21.5 TOOLE-BOT | MAX: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 22 AB FHEAD-T | MAX: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 22 AB FHEAD-B | MAX: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MIN: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | | | | |
| | MEAN: | 0.005 | 0.005 | 0.002 | 0.002 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |

NOTE: ALL VALUES ARE IN MG/L. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND A.S. MEANS ACID SOLUBLE.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 10

DEEP-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| | STATION | | TOTAL DEPTH | T (C) | PH FLD | PH LAB | SPEC COND | D.O. | HRD | FE T.R. | FE DISS | CU T.R. | CU DISS | ZN T.R. | ZN DISS | MN T.R. | MN DISS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | T FALLS-TP | MAX: | 40 | 24.0 | 8.2 | 8.50 | 206 | 12.3 | 100 | 0.06 | 0.02 | <0.01 | 0.02 | 0.12 | 0.08 | 0.02 | 0.01 |
| | | MIN: | 17 | 4.0 | 7.75 | 8.27 | 173 | 8.3 | 87 | 0.02 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.01 | <0.005 |
| | | MEAN: | 28. | 12.2 | 8.03 | 8.39 | 193. | 10.42 | 93. | 0.04 | 0.01 | 0.01 | 0.01 | 0.037 | 0.024 | 0.016 | 0.008 |
| | | N: | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 |
| 26 | T FALLS-BT | MAX: | 40 | 23.0 | 8.35 | 8.45 | 207 | 11.9 | 100 | 0.07 | 0.02 | 0.01 | 0.01 | 0.03 | 0.008 | 0.02 | 0.008 |
| | | MIN: | 28 | 7. | 7.75 | 8.29 | 173 | 8.4 | 87 | 0.03 | 0.01 | 0.01 | 0.01 | <0.005 | <0.005 | 0.01 | <0.005 |
| | | MEAN: | 34. | 17.2 | 8.15 | 8.40 | 192. | 9.97 | 93. | 0.04 | 0.01 | 0.01 | 0.01 | 0.013 | 0.006 | 0.015 | 0.006 |
| | | N: | 2 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 |
| 28 | NOXON-TOP | MAX: | 48 | 23.6 | 8.25 | 8.49 | 219 | 12.3 | 103 | 0.08 | 0.02 | <0.01 | <0.01 | 0.02 | 0.01 | 0.05 | 0.02 |
| | | MIN: | 22 | 4.0 | 7.7 | 8.21 | 170 | 8.4 | 85 | 0.01 | <0.01 | <0.01 | <0.01 | 0.005 | <0.005 | 0.007 | <0.005 |
| | | MEAN: | 37. | 12.4 | 8.04 | 8.37 | 192. | 10.46 | 91. | 0.05 | 0.01 | 0.01 | 0.01 | 0.009 | 0.006 | 0.023 | 0.010 |
| | | N: | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 |
| 28 | NOXON-BOT | MAX: | 48 | 23.0 | 8.2 | 8.51 | 207 | 12.4 | 101 | 0.09 | 0.02 | <0.01 | <0.01 | 0.03 | 0.05 | 0.04 | 0.05 |
| | | MIN: | 22 | 20.8 | 7.8 | 8.19 | 171 | 7.1 | 83 | 0.02 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.01 | <0.005 |
| | | MEAN: | 37. | 21.9 | 8.04 | 8.34 | 191. | 9.94 | 91. | 0.05 | 0.01 | 0.01 | 0.01 | 0.010 | 0.017 | 0.022 | 0.018 |
| | | N: | 3 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 |
| 30 | CAB GORG-T | MAX: | 29 | 21.5 | 8.2 | 8.42 | 207 | 12.8 | 96 | 0.07 | 0.01 | 0.02 | 0.02 | <0.005 | 0.04 | 0.02 | 0.006 |
| | | MIN: | 27 | 3.0 | 7.6 | 8.13 | 167 | 7.1 | 36 | 0.02 | 0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.01 | <0.005 |
| | | MEAN: | 28. | 11.8 | 7.92 | 8.27 | 187. | 10.01 | 77. | 0.04 | 0.01 | 0.01 | 0.01 | 0.005 | 0.014 | 0.016 | 0.005 |
| | | N: | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 |
| 30 | CAB GORG-B | MAX: | 29 | 21.5 | 8.2 | 8.34 | 206 | 12.8 | 96 | 0.36 | 0.02 | <0.01 | <0.01 | 0.02 | 0.006 | 0.08 | 0.008 |
| | | MIN: | 27 | 21. | 7.1 | 8.08 | 166 | 6.7 | 79 | 0.03 | <0.01 | <0.01 | <0.01 | <0.005 | <0.005 | 0.01 | 0.005 |
| | | MEAN: | 28. | 21.3 | 7.78 | 8.23 | 185. | 9.92 | 89. | 0.13 | 0.01 | 0.01 | 0.01 | 0.010 | 0.005 | 0.034 | 0.006 |
| | | N: | 3 | 2 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 |

NOTE: ALL VALUES ARE IN MG/L EXCEPT DEPTH(FEET), TEMPERATURE(DEG. C), PH(PH UNITS), AND S.C.(UMHOS/CM). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE. SOME FIELD PH VALUES ARE QUESTIONABLE. VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 10

DEEP-WATER CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| | STATION | | CD T.R. | CD DISS | AS T.R. | AS DISS | CR T.R. | CR DISS | PB T.R. | PB DISS | AG T.R. | AG DISS | CU A.S. | ZN A.S. | CD A.S. | PB A.S. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26 | T FALLS-TP | MAX: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.002 | 0.0054 | 0.0001 | 0.003 |
| | | MIN: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.002 | 0.0054 | 0.0001 | 0.003 |
| | | MEAN: | 0.005 | 0.005 | 0.001 | 0.001 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0020 | 0.0054 | 0.0001 | 0.0030 |
| | | N: | 5 | 4 | 5 | 4 | 3 | 3 | 5 | 4 | 3 | 3 | 1 | 1 | 1 | 1 |
| 26 | T FALLS-BT | MAX: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.003 | 0.0086 | 0.0001 | 0.002 |
| | | MIN: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.003 | 0.0086 | 0.0001 | 0.002 |
| | | MEAN: | 0.005 | 0.005 | 0.001 | 0.001 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0030 | 0.0086 | 0.0001 | 0.0020 |
| | | N: | 4 | 3 | 4 | 3 | 2 | 2 | 4 | 3 | 2 | 2 | 1 | 1 | 1 | 1 |
| 28 | NOXON-TOP | MAX: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.011 | 0.0310 | 0.0007 | 0.204 |
| | | MIN: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.011 | 0.0310 | 0.0007 | 0.204 |
| | | MEAN: | 0.005 | 0.005 | 0.001 | 0.001 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0110 | 0.0310 | 0.0007 | 0.2040 |
| | | N: | 5 | 4 | 5 | 4 | 3 | 3 | 5 | 4 | 3 | 3 | 1 | 1 | 1 | 1 |
| 28 | NOXON-BOT | MAX: | <0.005 | <0.005 | 0.002 | 0.002 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.003 | 0.0614 | 0.0013 | 0.138 |
| | | MIN: | <0.005 | <0.005 | <0.001 | <0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.003 | 0.0614 | 0.0013 | 0.138 |
| | | MEAN: | 0.005 | 0.005 | 0.001 | 0.001 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0030 | 0.0614 | 0.0013 | 0.1380 |
| | | N: | 5 | 4 | 5 | 4 | 3 | 3 | 5 | 4 | 3 | 3 | 1 | 1 | 1 | 1 |
| 30 | CAB GORG-T | MAX: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.001 | 0.0041 | 0.0003 | 0.003 |
| | | MIN: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.001 | 0.0041 | 0.0003 | 0.003 |
| | | MEAN: | 0.005 | 0.005 | 0.001 | 0.001 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0010 | 0.0041 | 0.0003 | 0.0030 |
| | | N: | 5 | 4 | 5 | 4 | 3 | 3 | 5 | 4 | 3 | 3 | 1 | 1 | 1 | 1 |
| 30 | CAB GORG-B | MAX: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.005 | 0.0091 | 0.0001 | 0.074 |
| | | MIN: | <0.005 | <0.005 | 0.001 | 0.001 | <0.02 | <0.02 | <0.05 | <0.05 | <0.01 | <0.01 | 0.005 | 0.0091 | 0.0001 | 0.074 |
| | | MEAN: | 0.005 | 0.005 | 0.001 | 0.001 | 0.02 | 0.02 | 0.05 | 0.05 | 0.01 | 0.01 | 0.0050 | 0.0091 | 0.0001 | 0.0740 |
| | | N: | 5 | 4 | 5 | 4 | 3 | 3 | 5 | 4 | 3 | 3 | 1 | 1 | 1 | 1 |

NOTE: ALL VALUES ARE IN MG/L. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND A.S. MEANS ACID SOLUBLE.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 10

### 3. Bottom Sediments

#### a. Rationale

In light of the quantities of heavy metals in the sediments behind Milltown Dam, it is reasonable to assume that there are elevated levels of heavy metals in the sediments of downstream pools and reservoirs. Comparing the organic content of sediments from behind Milltown Dam to those of still, deep waters downstream may indicate whether there is appreciable deposition and accumulation of organic solids originating from the Missoula wastewater treatment plant, Champion International, terrestrial or instream sources (algae production).

#### b. Methods

Samples of sediment were collected with a Petite Ponar Grab (bottom dredge) from the same 15 pools and reservoirs sampled for bottom and surface grabs. Sediments were analyzed for total and acid-leachable concentrations of heavy metals and percent organic content.

Sample collection and analysis methods are summarized in Table 11.

#### c. Results

Reservoir and river pool sediment analysis data are given in Table 12. A statistical summary of the results is presented in Table 13.

Table 11. Sample Collection and Analysis Methods for Bottom Sediment Monitoring

| Variable | Collection Method | Analytical Method | Laboratory |
|---|---|---|---|
| Organic Content (%) (PVDWS) | Petite Ponar grab sample | APHA 208 G. [1] | MDHES Chem Lab |
| Acid-Leachable and Total Metals ( ug/g) | Petite Ponar grab sample | Sample preparation prior to analysis described in Appendix B. | MDHES Chem Lab |
| Iron (FE T.R., FE TOT) | | EPA 200.7 [2] | |
| Copper (CU T.R., CU TOT) | | EPA 200.7 [2] | |
| Manganese (MN T.R., MN TOT) | | EPA 200.7 [2] | |
| Cadmium (CD T.R., CD TOT) | | EPA 200.7 [2] | |
| Arsenic (AS T.R., AS TOT) | | EPA 200.7 [2] | |
| Chromium (CR T.R., CR TOT) | | EPA 200.7 [2] | |
| Lead (PB T.R., PB TOT) | | EPA 200.7 [2] | |
| Silver (AG T.R., AG TOT) | | EPA 200.7 [2] | |

References

1) "Standard Methods for the Examination of Water and Wastewater," Joint Editorial Board, American Public Health Association, American Water Works Association and Water Pollution Control Federation, 15th Edition, 1981.

2) "Methods for Chemical Analysis of Water and Waste," EPA-600/4-79-020 U.S. Environmental Protection Agency, 1983 (Revised).

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON MARCH 5-8, 1984

| | STATION | DAY | DEPTH | PVDWS | FE T.R. | FE TOT | CU T.R. | CU TOT | ZN T.R. | ZN TOT | MN T.R. | MN TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | 05 | 8 | 1.0 | 2290. | 5543. | 55. | 51.6 | 251. | 277. | 174. | 292. |
| | | | | 0.2 | 2510. | 4451. | 49. | 52.9 | 246. | 269. | 181. | 218. |
| | | | | 0.4 | 3660. | 6665. | 120. | 115. | 447. | 458. | 336. | 313. |
| 13 | MARCURE | 06 | 3 | 0.35 | 2670. | 5064. | 38. | 24.8 | 123. | 132. | 262. | 236. |
| | | | 3 | 0.5 | 2400. | 5131. | 38. | 35.6 | 113. | 129. | 215. | 249. |
| | | | 3 | 0.4 | 3170. | 4710. | 68. | 28.5 | 141. | 135. | 311. | 260. |
| 15 | HUSON | | | | | | | | | | | |
| 16 | NINEMILE | 06 | 3 | 0.7 | 2410. | 7632. | 55. | 117. | 140. | 251. | 219. | 602. |
| | | | 3 | 0.7 | 2440. | 5544. | 50. | 54.6 | 127. | 147. | 190. | 284. |
| | | | 3 | 0.8 | 4390. | 6820. | 162. | 167. | 362. | 339. | 519. | 447. |
| 17 | BEL FISH C | | | | | | | | | | | |
| 18 | TARKIO | 07 | 15 | 0.2 | 1840. | 3981. | 10. | <2.6 | 42. | 55.3 | 199. | 303. |
| 19.5 | SUPERIOR | 07 | 25 | 1.1 | 4010. | 7598. | 90. | 114. | 211. | 251. | 431. | 508. |
| | | | 25 | 0.7 | 3700. | 6583. | 63. | 42. | 182. | 161. | 324. | 247. |
| 20 | LAVISTA | | | | | | | | | | | |
| 20.5 | RED HILL | | | | | | | | | | | |
| 21 | BOXCAR | | | | | | | | | | | |
| 21.5 | TOOLE | | | | | | | | | | | |
| 22 | ABV FLHEAD | | | | | | | | | | | |
| 26 | T FALLS | 08 | 57 | 0.6 | 3960. | 9583. | 55. | 108. | 129. | 230. | 270. | 329. |
| | | | 20 | 1.9 | 7540. | 12100. | 175. | 150. | 353. | 321. | 904. | 802. |
| | | | 17 | 1.6 | 6470. | 12600. | 146. | 149. | 297. | 313. | 840. | 795. |
| 28 | NOXON | 08 | 22 | 1.6 | 5740. | 14400. | 63. | 65.7 | 114. | 162. | 235. | 377. |
| 30 | CAB GORGE | 08 | 25 | 0.4 | 3340. | 8224. | <5. | <2.4 | <5. | 26.0 | 202. | 163. |
| | | | 27 | 0.6 | 4070. | 8918. | 3. | <2.4 | <5. | 31.8 | 198. | 252. |
| | | | 43 | 1.1 | 5400. | 11300. | 34. | 28.6 | 134. | 156. | 428. | 587. |

NOTE: ALL VALUES ARE IN UG/G EXCEPT DEPTH(FEET) AND PERCENT VOLATILE DRY WEIGHT SOLIDS (%).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON MARCH 5-8, 1984

| | STATION | DAY | CD T.R. | CD TOT | AS T.R. | AS TOT | CR T.R. | PB T.R. | PB TOT | AG T.R. |
|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | 05 | <5. | <1.2 | 6. | 0.6 | <20. | <50. | | <10. |
| | | | <5. | <1.1 | 5. | 2.2 | <20. | <50. | | <10. |
| | | | <5. | <1.1 | 10. | 2.6 | <20. | <50. | | <10. |
| 13 | MARCURE | 06 | <5. | <1.2 | 4. | 2.5 | <20. | <50. | | <10. |
| | | | <5. | <1.1 | 4. | 2.6 | <20. | <50. | | <10. |
| | | | <5. | <1.2 | 4. | 3.1 | <20. | <50. | | <10. |
| 15 | HUSON | | | | | | | | | |
| 16 | NINEMILE | 06 | <5. | <1.1 | 4. | 2.3 | <20. | <50. | | <10. |
| | | | <5. | <1.1 | 5. | 2.1 | <20. | <50. | | <10. |
| | | | <5. | <1.2 | 16. | 2.2 | <20. | <50. | | <10. |
| 17 | BEL FISH C | | | | | | | | | |
| 18 | TARKIO | 07 | <5. | <1.3 | 1. | 2.4 | <20. | <50. | | <10. |
| 19.5 | SUPERIOR | 07 | <5. | <1.3 | 6. | 3.1 | <20. | <50. | | <10. |
| | | | <5. | <1.2 | 5. | 3.0 | <20. | <50. | | <10. |
| 20 | LAVISTA | | | | | | | | | |
| 20.5 | RED HILL | | | | | | | | | |
| 21 | BOXCAR | | | | | | | | | |
| 21.5 | TOOLE | | | | | | | | | |
| 22 | ABV FLHEAD | | | | | | | | | |
| 26 | T FALLS | 08 | <5. | <1.3 | 5. | 3.4 | <20. | <50. | | <10. |
| | | | <5. | <1.4 | 15. | 3.4 | <20. | <50. | | <10. |
| | | | <5. | <1.2 | 11. | 2.8 | <20. | <50. | | <10. |
| 28 | NOXON | 08 | <5. | <1.2 | 3. | 3.0 | <20. | <50. | | <10. |
| 30 | CAB GORGE | 08 | <5. | <1.2 | 1. | 3.4 | <20. | <50. | | <10. |
| | | | <5. | <1.2 | 1. | 2.7 | <20. | <50. | | <10. |
| | | | <5. | <1.2 | 4. | 2.8 | <20. | <50. | | <10. |

NOTE: ALL VALUES ARE IN UG/G. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JULY 23-26, 1984

| | STATION | DAY | DEPTH | PVDWS | FE T.R. | FE TOT | CU T.R. | CU TOT | ZN T.R. | ZN TOT | MN T.R. | MN TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | | | | | | | | | | | |
| 13 | MARCURE | 23 | 4 | 0.13 | 1460. | 3928. | 10. | 13.1 | 59. | 65.3 | 150. | 146. |
| 15 | HUSON | | | | | | | | | | | |
| 16 | NINEMILE | 23 | 6 | 0.24 | 1980. | 5631. | 30. | 37.4 | 104. | 119. | 130. | 169. |
| | | | 6 | 0.14 | 1140. | 4724. | 10. | 16.3 | 56. | 70.2 | 120. | 150. |
| 17 | BEL FISH C | 24 | 3 | 0.10 | 1190. | 5235. | <10. | 13.2 | 42. | 48.7 | 100. | 139. |
| 18 | TARKIO | 24 | 20 | 0.39 | 2040. | 6917. | 30. | 62.7 | 100. | 138. | 160. | 213. |
| 19.5 | SUPERIOR | | | | | | | | | | | |
| 20 | LAVISTA | | | | | | | | | | | |
| 20.5 | RED HILL | 19 | 12 | 0.17 | 1940. | 6915. | 20. | 17.5 | 74. | 80.2 | 160. | 180. |
| 21 | BOXCAR | 19 | 8 | 0.11 | 1050. | 4300. | <10. | 13.1 | 30. | 37.2 | 120. | 149. |
| | | | 8 | 0.10 | 1170. | 4444. | <10. | 4.6 | 40. | 29.1 | 120. | 137. |
| | | | 8 | 0.10 | 1220. | 4770. | <10. | 4.4 | 35. | 39.4 | 120. | 147. |
| | | | 8 | 0.18 | 1130. | 5165. | <10. | 4.9 | 30. | 36.5 | 110. | 138. |
| 21.5 | TOOLE | 20 | 18 | 0.15 | 1360. | 6749. | <10. | 4.9 | 45. | 49.4 | 160. | 200. |
| | | | 32 | 0.10 | 1270. | 4436. | <10. | 5.3 | 38. | 37.4 | 120. | 138. |
| | | | 28 | 0.10 | 1190. | 4087. | <10. | 4.8 | 38. | 40.7 | 110. | 134. |
| | | | 5 | 0.42 | 2280. | 5135. | 20. | 21.2 | 93. | 90.2 | 160. | 159. |
| | | | 15 | 0.32 | 1760. | 5389. | 20. | 21.8 | 71. | 96.0 | 120. | 162. |
| 22 | ABV FLHEAD | 20 | 3 | 0.55 | 2440. | 5935. | 30. | 34.0 | 120. | 115. | 220. | 217. |
| 26 | T FALLS | | | | | | | | | | | |
| 28 | NOXON | | | | | | | | | | | |
| 30 | CAB GORGE | | | | | | | | | | | |

NOTE: ALL VALUES ARE IN UG/G EXCEPT DEPTH(FEET) AND PERCENT VOLATILE DRY WEIGHT SOLIDS (%).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.
SOME OF THE SAMPLES IN THIS SET WERE COLLECTED BY U. OF MONTANA PERSONELL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JULY 23-26, 1984

| | STATION | DAY | CD T.R. | CD TOT | AS T.R. | AS TOT | CR T.R. | PB T.R. | PB TOT | AG T.R. |
|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | | | | | | | | | |
| 13 | MARCURE | 23 | <5. | <1.2 | 1. | 1.3 | | | | |
| 15 | HUSON | | | | | | | | | |
| 16 | NINEMILE | 23 | <5. | <1.2 | 2. | 2.1 | | | | |
| | | | <5. | <1.2 | 1. | 2.1 | | | | |
| 17 | BEL FISH C | 24 | <5. | <1.2 | 1. | 2.2 | | | | |
| 18 | TARKIO | 24 | <5. | <1.2 | 2. | 2.6 | | | | |
| 19.5 | SUPERIOR | | | | | | | | | |
| 20 | LAVISTA | | | | | | | | | |
| 20.5 | RED HILL | 19 | <5. | <1.2 | 2. | 3.0 | | | | |
| 21 | BOXCAR | 19 | <5. | <1.2 | <1. | 1.3 | | | | |
| | | | <5. | <1.2 | <1. | 1.6 | | | | |
| | | | <5. | <1.2 | 1. | 1.3 | | | | |
| | | | <5. | <1.2 | <1. | 2.9 | | | | |
| 21.5 | TOOLE | 20 | <5. | <1.3 | 1. | 3.3 | | | | |
| | | | <5. | <1.2 | <1. | 4.1 | | | | |
| | | | <5. | <1.2 | 1. | 3.3 | | | | |
| | | | <5. | <1.3 | 2. | 3.0 | | | | |
| | | | <5. | <1.1 | 2. | 2.2 | | | | |
| 22 | ABV FLHEAD | 20 | <5. | <1.1 | 3. | 2.7 | | | | |
| 26 | T FALLS | | | | | | | | | |
| 28 | NOXON | | | | | | | | | |
| 30 | CAB GORGE | | | | | | | | | |

NOTE: ALL VALUES ARE IN UG/G. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL. SOME OF THE SAMPLES IN THIS SET WERE COLLECTED BY U. OF MONTANA PERSONELL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON OCT 25-26, 1984

| | STATION | DAY | DEPTH | PVDWS | FE T.R. | FE TOT | CU T.R. | CU TOT | ZN T.R. | ZN TOT | MN T.R. | MN TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | 25 | 9 | 0.67 | 2010. | 6090. | 90. | 90.6 | 351. | 332. | 290. | 244. |
| | | | 9 | 0.41 | 2530. | 5160. | 60. | 73.6 | 314. | 289. | 200. | 197. |
| | | | 9 | 0.58 | 2280. | 5025. | 100. | 69.6 | 390. | 296. | 270. | 174. |
| 13 | MARCURE | | | | | | | | | | | |
| 15 | HUSON | | | | | | | | | | | |
| 16 | NINEMILE | | | | | | | | | | | |
| 17 | BEL FISH C | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | |
| 19.5 | SUPERIOR | | | | | | | | | | | |
| 20 | LAVISTA | | | | | | | | | | | |
| 20.5 | RED HILL | | | | | | | | | | | |
| 21 | BOXCAR | | | | | | | | | | | |
| 21.5 | TOOLE | | | | | | | | | | | |
| 22 | ABV FLHEAD | | | | | | | | | | | |
| 26 | T FALLS | 26 | 32 | 0.93 | 2420. | 7457. | 80. | 87.7 | 203. | 202. | 210. | 200. |
| | | | 32 | 0.23 | 1600. | 3811. | 10. | 7.0 | 59. | 48.8 | 60. | 62.8 |
| | | | 32 | 2.98 | 1650. | 3955. | 20. | 9.6 | 63. | 57.8 | 100. | 96.3 |
| 28 | NOXON | 25 | 48 | 1.48 | 5070. | 13740. | 120. | 138. | 257. | 291. | 370. | 429. |
| | | | 48 | 1.29 | 4910. | 13730. | 110. | 140. | 247. | 285. | 370. | 393. |
| | | | 48 | 1.42 | 5340. | 13090. | 120. | 129. | 283. | 288. | 420. | 406. |
| | | | 38 | 1.20 | 5880. | 15260. | 140. | 144. | 287. | 297. | 440. | 462. |
| | | | 38 | 1.50 | 5990. | 19000. | 150. | 174. | 300. | 346. | 420. | 490. |
| | | | 38 | 1.16 | 6040. | 16300. | 140. | 144. | 279. | 302. | 420. | 478. |
| 30 | CAB GORGE | 26 | 29 | 1.64 | 3490. | 9567. | 20. | 18.9 | 96. | 99.4 | 320. | 277. |
| | | | 29 | 1.03 | 2600. | 11690. | 20. | <2.7 | 59. | 73.8 | 220. | 219. |
| | | | 29 | 1.34 | 3970. | 10450. | 30. | 27.6 | 118. | 132. | 270. | 266. |

NOTE: ALL VALUES ARE IN UG/G EXCEPT DEPTH(FEET) AND PERCENT VOLATILE DRY WEIGHT SOLIDS (%).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON OCT 25-26, 1984

| | STATION | DAY | CD T.R. | CD TOT | AS T.R. | AS TOT | CR T.R. | PB T.R. | PB TOT | AG T.R. |
|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | 25 | <5. | <1.2 | 8. | 2.6 | | | | |
| | | | <5. | <1.3 | 7. | 2.7 | | | | |
| | | | 6. | <1.2 | 10. | 2.7 | | | | |
| 13 | MARCURE | | | | | | | | | |
| 15 | HUSON | | | | | | | | | |
| 16 | NINEMILE | | | | | | | | | |
| 17 | BEL FISH C | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | |
| 19.5 | SUPERIOR | | | | | | | | | |
| 20 | LAVISTA | | | | | | | | | |
| 20.5 | RED HILL | | | | | | | | | |
| 21 | BOXCAR | | | | | | | | | |
| 21.5 | TOOLE | | | | | | | | | |
| 22 | ABV FLHEAD | | | | | | | | | |
| 26 | T FALLS | 26 | <5. | <1.2 | 6. | 3.1 | | | | |
| | | | <5. | <1.2 | 1. | 2.3 | | | | |
| | | | <5. | <1.2 | 1. | 2.7 | | | | |
| 28 | NOXON | 25 | 7. | <1.2 | 6. | 2.7 | | | | |
| | | | 6. | <1.3 | 7. | 3.3 | | | | |
| | | | 6. | <1.4 | 8. | 2.4 | | | | |
| | | | 7. | <1.2 | 7. | 2.4 | | | | |
| | | | 7. | <1.2 | 8. | 0.7 | | | | |
| | | | 7. | <1.2 | 6. | 3.1 | | | | |
| 30 | CAB GORGE | 26 | <5. | <1.2 | 3. | 2.1 | | | | |
| | | | <5. | <1.3 | 2. | 2.7 | | | | |
| | | | <5. | <1.2 | 4. | 2.7 | | | | |

NOTE: ALL VALUES ARE IN UG/G. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON MARCH 25-26, 1985

| | STATION | DAY | DEPTH | PVDWS | FE T.R. | FE TOT | CU T.R. | CU TOT | ZN T.R. | ZN TOT | MN T.R. | MN TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | 25 | | | 5600. | 9644. | 260. | 270. | 740. | 725. | 700. | 652. |
| | | | | | 6910. | 10490. | 360. | 363. | 950. | 819. | 940. | 812. |
| | | | | | 6190. | 9743. | 290. | 274. | 820. | 704. | 780. | 647. |
| 13 | MARCURE | | | | | | | | | | | |
| 15 | HUSON | | | | | | | | | | | |
| 16 | NINEMILE | | | | | | | | | | | |
| 17 | BEL FISH C | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | |
| 19.5 | SUPERIOR | | | | | | | | | | | |
| 20 | LAVISTA | | | | | | | | | | | |
| 20.5 | RED HILL | | | | | | | | | | | |
| 21 | BOXCAR | | | | | | | | | | | |
| 21.5 | TOOLE | | | | | | | | | | | |
| 22 | ABV FLHEAD | | | | | | | | | | | |
| 26 | T FALLS | 25 | | | 4810. | 9891. | 60. | 65.9 | 164. | 166. | 250. | 266. |
| | | | | | 2550. | 6583. | 20. | 30.4 | 74. | 94.7 | 110. | 147. |
| | | | | | 4080. | 6654. | 40. | 37.6 | 132. | 106. | 200. | 163. |
| 28 | NOXON | 26 | | | 7160. | 14150. | 80. | 85.2 | 202. | 211. | 350. | 358. |
| | | | | | 7190. | 14060. | 80. | 81.5 | 203. | 201. | 400. | 385. |
| | | | | | 9640. | 17240. | 160. | 158. | 348. | 346. | 610. | 565. |
| | | | | | 9340. | 17840. | 160. | 174. | 361. | 367. | 580. | 572. |
| | | | | | 9720. | 16970. | 170. | 172. | 364. | 372. | 630. | 597. |
| 30 | CAB GORGE | 26 | | | 4270. | 6650. | 20. | 8.6 | 104. | 69.1 | 590. | 254. |
| | | | | | 3410. | 12000. | <10. | 14.0 | 85. | 118. | 290. | 500. |
| | | | | | 3130. | 8910. | <10. | 2.0 | 71. | 72.9 | 290. | 334. |

NOTE: ALL VALUES ARE IN UG/G EXCEPT DEPTH(FEET) AND PERCENT VOLATILE DRY WEIGHT SOLIDS (%). IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON MARCH 25-26, 1985

| | STATION | DAY | CD T.R. | CD TOT | AS T.R. | AS TOT | CR T.R. | PB T.R. | PB TOT | AG T.R. |
|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | 25 | <5. | 1.5 | 26. | 31.6 | | 60. | 49.8 | |
| | | | <5. | <1.5 | 36. | 39.6 | | 80. | 58.7 | |
| | | | <5. | <1.5 | 28. | 30.4 | | 70. | 35.5 | |
| 13 | MARCURE | | | | | | | | | |
| 15 | HUSON | | | | | | | | | |
| 16 | NINEMILE | | | | | | | | | |
| 17 | BEL FISH C | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | |
| 19.5 | SUPERIOR | | | | | | | | | |
| 20 | LAVISTA | | | | | | | | | |
| 20.5 | RED HILL | | | | | | | | | |
| 21 | BOXCAR | | | | | | | | | |
| 21.5 | TOOLE | | | | | | | | | |
| 22 | ABV FLHEAD | | | | | | | | | |
| 26 | T FALLS | 25 | <5. | <1.5 | 5. | 5.5 | | <50. | 18.8 | |
| | | | <5. | <1.5 | 1. | 3.4 | | <50. | <12.0 | |
| | | | <5. | <1.5 | 2. | 4.2 | | <50. | <12.0 | |
| 28 | NOXON | 26 | <5. | <1.5 | 6. | 9.2 | | <50. | 25.6 | |
| | | | <5. | <1.5 | 6. | 9.5 | | <50. | 17.0 | |
| | | | <5. | <1.5 | 9. | 12.6 | | 60. | 31.0 | |
| | | | <5. | <1.5 | 10. | 12.7 | | 70. | 31.3 | |
| | | | <5. | <1.5 | 9. | 13.2 | | 80. | 34.4 | |
| 30 | CAB GORGE | 26 | <5. | <1.5 | 4. | 3.6 | | <50. | <12.0 | |
| | | | <5. | <1.5 | 2. | 7.0 | | <50. | <12.0 | |
| | | | <5. | <1.5 | 2. | 4.0 | | <50. | <12.0 | |

NOTE: ALL VALUES ARE IN UG/G. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART I
RESULTS OF SAMPLES TAKEN ON JULY 29-30,1985

| | STATION | DAY | DEPTH | PVDWS | FE T.R. | FE TOT | CU T.R. | CU TOT | ZN T.R. | ZN TOT | MN T.R. | MN TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | 29 | | | 6500. | [illegible] | 460. | 495. | 1060. | 1027. | 1040. | 1018. |
| | | | | | 6240. | [illegible] | 430. | 441. | 991. | 973. | 1080. | 1027. |
| | | | | | 5620. | [illegible] | 360. | 405. | 925. | 914. | 820. | 827. |
| 13 | MARCURE | | | | | | | | | | | |
| 15 | HUSON | | | | | | | | | | | |
| 16 | NINEMILE | | | | | | | | | | | |
| 17 | BEL FISH C | | | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | | | |
| 19.5 | SUPERIOR | | | | | | | | | | | |
| 20 | LAVISTA | | | | | | | | | | | |
| 20.5 | RED HILL | | | | | | | | | | | |
| 21 | BOXCAR | | | | | | | | | | | |
| 21.5 | TOOLE | | | | | | | | | | | |
| 22 | ABV FLHEAD | | | | | | | | | | | |
| 26 | T FALLS | 29 | | | 3130. | [illegible] | 30. | 29.3 | 101. | 102. | 100. | 119. |
| | | | | | 4680. | [illegible] | 70. | 65.8 | 158. | 150. | 190. | 198. |
| 28 | NOXON | 30 | | | 6430. | [illegible] | 90. | 89.7 | 224. | 226. | 490. | 460. |
| | | | | | 6410. | [illegible] | 100. | 105. | 222. | 233. | 270. | 298. |
| | | | | | 5560. | [illegible] | 90. | 135. | 237. | 274. | 130. | 162. |
| | | | | | 7850. | [illegible] | 140. | 149. | 317. | 325. | 470. | 470. |
| | | | | | 7380. | [illegible] | 140. | 146. | 300. | 309. | 410. | 422. |
| 30 | CAB GORGE | 30 | | | 5570. | [illegible] | 40. | 49.3 | 197. | 213. | 300. | 301. |
| | | | | | 5540. | [illegible] | 40. | 49.8 | 197. | 205. | 300. | 305. |
| | | | | | 5340. | [illegible] | 40. | 49.9 | 201. | 203. | 290. | 301. |

NOTE: ALL VALUES ARE IN UG/G EXCEPT DEPTH(FEET) AND PERCENT VOLATILE DRY WEIGHT SOLIDS (%).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING RESULTS - PART II
RESULTS OF SAMPLES TAKEN ON JULY 29-30, 1985

| | STATION | DAY | CD T.R. | CD TOT | AS T.R. | AS TOT | CR T.R. | PB T.R. | PB TOT | AG T.R. |
|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | 29 | 6. | 5.6 | 44. | 45.2 | | 50. | 77.2 | |
| | | | <5. | 4.3 | 41. | 49.2 | | 50. | 83.4 | |
| | | | <5. | 4.1 | 36. | 43.6 | | 80. | 64.9 | |
| 13 | MARCURE | | | | | | | | | |
| 15 | HUSON | | | | | | | | | |
| 16 | NINEMILE | | | | | | | | | |
| 17 | BEL FISH C | | | | | | | | | |
| 18 | TARKIO | | | | | | | | | |
| 19.5 | SUPERIOR | | | | | | | | | |
| 20 | LAVISTA | | | | | | | | | |
| 20.5 | RED HILL | | | | | | | | | |
| 21 | BOXCAR | | | | | | | | | |
| 21.5 | TOOLE | | | | | | | | | |
| 22 | ABV FLHEAD | | | | | | | | | |
| 26 | T FALLS | 29 | <5. | <2.0 | 2. | 3.1 | | <50. | 23.5 | |
| | | | <5. | <2.0 | 4. | 5.2 | | <50. | 23.2 | |
| 28 | NOXON | 30 | <5. | <2.0 | 5. | 4.5 | | <50. | 27.3 | |
| | | | <5. | <2.0 | 4. | 3.2 | | <50. | 30.3 | |
| | | | <5. | <2.0 | 3. | 4.3 | | <50. | 28.5 | |
| | | | <5. | <2.0 | 8. | 11.2 | | <50. | 39.3 | |
| | | | <5. | <2.0 | 9. | 7.7 | | <50. | 39.6 | |
| 30 | CAB GORGE | 30 | <5. | <2.0 | 5. | 6.2 | | <50. | 22.9 | |
| | | | <5. | <2.0 | 5. | 7.7 | | <50. | 24.9 | |
| | | | <5. | <2.0 | 5. | 7.4 | | <50. | 18.5 | |

NOTE: ALL VALUES ARE IN UG/G. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.

TABLE 12

SEDIMENT CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| | STATION | | DEPTH | PVDWS | FE T.R. | FE TOT | CU T.R. | CU TOT | ZN T.R. | ZN TOT | MN T.R. | MN TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | MAX: | 9 | 1.0 | 6910. | 13510. | 460. | 495. | 1060. | 1027. | 1080. | 1027. |
| | | MIN: | 8 | 0.2 | 2010. | 4451. | 49. | 51.6 | 246. | 269. | 174. | 174. |
| | | MEAN: | 9. | 0.54 | 4361.7 | 8413.4 | 219.5 | 225.1 | 623.7 | 590.2 | 567.6 | 535.1 |
| | | N: | 4 | 6 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 13 | MARCURE | MAX: | 4 | 0.5 | 3170. | 5131. | 68. | 35.6 | 141. | 135. | 311. | 260. |
| | | MIN: | 3 | 0.13 | 1460. | 3928. | 10. | 13.1 | 59. | 65.3 | 150. | 146. |
| | | MEAN: | 3. | 0.34 | 2425.0 | 4708.2 | 38.5 | 25.5 | 109.0 | 115.3 | 234.5 | 222.7 |
| | | N: | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 15 | HUSON | MAX: | | | | | | | | | | |
| | | MIN: | | | | | | | | | | |
| | | MEAN: | 0. | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | NINEMILE | MAX: | 6 | 0.8 | 4390. | 7632. | 162. | 167. | 362. | 339. | 519. | 602. |
| | | MIN: | 3 | 0.14 | 1140. | 4724. | 10. | 16.3 | 56. | 70.2 | 120. | 150. |
| | | MEAN: | 4. | 0.52 | 2472.0 | 6070.2 | 61.4 | 78.5 | 157.8 | 185.2 | 235.6 | 330.4 |
| | | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 17 | BEL FISH C | MAX: | 3 | 0.10 | 1190. | 5235. | <10. | 13.2 | 42. | 48.7 | 100. | 139. |
| | | MIN: | 3 | 0.10 | 1190. | 5235. | <10. | 13.2 | 42. | 48.7 | 100. | 139. |
| | | MEAN: | 3. | 0.10 | 1190.0 | 5235.0 | 10.0 | 13.2 | 42.0 | 48.7 | 100.0 | 139.0 |
| | | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 18 | TARKIO | MAX: | 20 | 0.39 | 2040. | 6917. | 30. | 62.7 | 100. | 138. | 199. | 303. |
| | | MIN: | 15 | 0.2 | 1840. | 3981. | 10. | <2.6 | 42. | 55.3 | 160. | 213. |
| | | MEAN: | 18. | 0.29 | 1940.0 | 5449.0 | 20.0 | 32.6 | 71.0 | 96.6 | 179.5 | 258.0 |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 19.5 | SUPERIOR | MAX: | 25 | 1.1 | 4010. | 7598. | 90. | 114. | 211. | 251. | 431. | 508. |
| | | MIN: | 25 | 0.7 | 3700. | 6583. | 63. | 42. | 182. | 161. | 324. | 247. |
| | | MEAN: | 25. | 0.90 | 3855.0 | 7090.5 | 76.5 | 78.0 | 196.5 | 206.0 | 377.5 | 377.5 |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 20 | LAVISTA | MAX: | | | | | | | | | | |
| | | MIN: | | | | | | | | | | |
| | | MEAN: | 0. | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

NOTE: ALL VALUES ARE IN UG/G EXCEPT DEPTH(FEET) AND PERCENT VOLATILE DRY WEIGHT SOLIDS (%).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 13

SEDIMENT CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| STATION | | | CD T.R. | CD TOT | AS T.R. | AS TOT | CR T R. | PB T.R. | PB TOT | AG T.R. |
|---|---|---|---|---|---|---|---|---|---|---|
| 03 | MILLTOWN | MAX: | 6. | 5.6 | 44. | 49.2 | <20. | 80. | 83.4 | <10. |
| | | MIN: | <5. | <1.1 | 5. | 0.6 | <20. | <50. | 35.5 | <10. |
| | | MEAN: | 5.2 | 2.1 | 21.4 | 21.1 | 20.0 | 60.0 | 61.6 | 10.0 |
| | | N: | 12 | 12 | 12 | 12 | 3 | 9 | 6 | 3 |
| 13 | MARCURE | MAX: | <5. | <1.2 | 4. | 3.1 | <20. | <50. | | <10. |
| | | MIN: | <5. | <1.1 | 1. | 1.3 | <20. | <50. | | <10. |
| | | MEAN: | 5.0 | 1.2 | 3.3 | 2.4 | 20.0 | 50.0 | 0.0 | 10.0 |
| | | N: | 4 | 4 | 4 | 4 | 3 | 3 | 0 | 3 |
| 15 | HUSON | MAX: | | | | | | | | |
| | | MIN: | | | | | | | | |
| | | MEAN: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | NINEMILE | MAX: | <5. | <1.2 | 16. | 2.3 | <20. | <50. | | <10. |
| | | MIN: | <5. | <1.1 | 1. | 2.1 | <20. | <50. | | <10. |
| | | MEAN: | 5.0 | 1.2 | 5.6 | 2.2 | 20.0 | 50.0 | 0.0 | 10.0 |
| | | N: | 5 | 5 | 5 | 5 | 3 | 3 | 0 | 3 |
| 17 | BEL FISH C | MAX: | <5. | <1.2 | 1. | 2.2 | | | | |
| | | MIN: | <5. | <1.2 | 1. | 2.2 | | | | |
| | | MEAN: | 5.0 | 1.2 | 1.0 | 2.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | N: | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 18 | TARKIO | MAX: | <5. | <1.3 | 2. | 2.6 | <20. | <50. | | <10. |
| | | MIN: | <5. | <1.2 | 1. | 2.4 | <20. | <50. | | <10. |
| | | MEAN: | 5.0 | 1.3 | 1.5 | 2.5 | 20.0 | 50.0 | 0.0 | 10.0 |
| | | N: | 2 | 2 | 2 | 2 | 1 | 1 | 0 | [illegible] |
| 19.5 | SUPERIOR | MAX: | <5. | <1.3 | 6. | 3.1 | <20. | <50. | | <10. |
| | | MIN: | <5. | <1.2 | 5. | 3.0 | <20. | <50. | | <10. |
| | | MEAN: | 5.0 | 1.3 | 5.5 | 3.1 | 20.0 | 50.0 | 0.0 | 10.0 |
| | | N: | 2 | 2 | 2 | 2 | 2 | 2 | 0 | 2 |
| 20 | LAVISTA | MAX: | | | | | | | | |
| | | MIN: | | | | | | | | |
| | | MEAN: | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | N: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

NOTE: ALL VALUES ARE IN UG/G. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 13

SEDIMENT CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART I

| STATION | | DEPTH | PVDWS | FE T.R. | FE TOT | CU T.R. | CU TOT | ZN T.R. | ZN TOT | MN T.R. | MN TOT |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 20.5 RED HILL | MAX: | 12 | 0.17 | 1940. | 6915. | 20. | 17.5 | 74. | 80.2 | 160. | 180. |
| | MIN: | 12 | 0.17 | 1940. | 6915. | 20. | 17.5 | 74. | 80.2 | 160. | 180. |
| | MEAN: | 12. | 0.17 | 1940.0 | 6915.0 | 20.0 | 17.5 | 74.0 | 80.2 | 160.0 | 180.0 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 21 BOXCAR | MAX: | 8 | 0.18 | 1220. | 5165. | <10. | 13.1 | 40. | 39.4 | 120. | 149. |
| | MIN: | 8 | 0.10 | 1050. | 4300. | <10. | 4.4 | 30. | 29.1 | 110. | 137. |
| | MEAN: | 8. | 0.12 | 1142.5 | 4669.7 | 10.0 | 6.7 | 33.8 | 35.5 | 117.5 | 142.7 |
| | N: | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 21.5 TOOLE | MAX: | 32 | 0.42 | 2280. | 6749. | 20. | 21.8 | 93. | 96.0 | 160. | 200. |
| | MIN: | 5 | 0.10 | 1190. | 4087. | <10. | 4.8 | 38. | 37.4 | 110. | 134. |
| | MEAN: | 20. | 0.22 | 1572.0 | 5159.2 | 14.0 | 11.6 | 57.0 | 62.7 | 134.0 | 158.6 |
| | N: | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 22 ABV FLHEAD | MAX: | 3 | 0.55 | 2440. | 5935. | 30. | 34.0 | 120. | 115. | 220. | 217. |
| | MIN: | 3 | 0.55 | 2440. | 5935. | 30. | 34.0 | 120. | 115. | 220. | 217. |
| | MEAN: | 3. | 0.55 | 2440.0 | 5935.0 | 30.0 | 34.0 | 120.0 | 115.0 | 220.0 | 217.0 |
| | N: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 26 T FALLS | MAX: | 57 | 2.98 | 7540. | 12600. | 175. | 150. | 353. | 321. | 904. | 802. |
| | MIN: | 17 | 0.23 | 1600. | 3811. | 10. | 7.0 | 59. | 48.8 | 60. | 62.8 |
| | MEAN: | 32. | 1.37 | 3899.1 | 8135.2 | 64.2 | 67.3 | 157.5 | 162.8 | 294.0 | 288.9 |
| | N: | 6 | 6 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 28 NOXON | MAX: | 48 | 1.6 | 9720. | 19000. | 170. | 174. | 364. | 372. | 630. | 597. |
| | MIN: | 22 | 1.16 | 4910. | 13030. | 63. | 65.7 | 114. | 162. | 130. | 162. |
| | MEAN: | 40. | 1.38 | 6802.9 | 15302.4 | 120.8 | 131.2 | 267.4 | 284.4 | 412.6 | 430.8 |
| | N: | 7 | 7 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| 30 CAB GORGE | MAX: | 43 | 1.64 | 5570. | 12000. | 40. | 49.9 | 201. | 213. | 590. | 587. |
| | MIN: | 25 | 0.4 | 2600. | 6650. | 3. | 2.0 | <5. | 26.0 | 198. | 163. |
| | MEAN: | 30. | 1.02 | 4177.5 | 10091.6 | 22.7 | 21.3 | 106.0 | 116.7 | 308.2 | 313.2 |
| | N: | 6 | 6 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |

NOTE: ALL VALUES ARE IN UG/G EXCEPT DEPTH(FEET) AND PERCENT VOLATILE DRY WEIGHT SOLIDS (%).
IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 13

SEDIMENT CHEMICAL/PHYSICAL MONITORING - STATISTICAL SUMMARY - PART II

| STATION | | CD T.R. | CD TOT | AS T.R. | AS TOT | CR T R. | PB T.R. | PB TOT | AG T.R. |
|---|---|---|---|---|---|---|---|---|---|
| 20.5 RED HILL | MAX: | <5. | <1.2 | 2. | 3.0 | | | | |
| | MIN: | <5. | <1.2 | 2. | 3.0 | | | | |
| | MEAN: | 5.0 | 1.2 | 2.0 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | N: | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 21 BOXCAR | MAX: | <5. | <1.2 | <1. | 2.9 | | | | |
| | MIN: | <5. | <1.2 | <1. | 1.3 | | | | |
| | MEAN: | 5.0 | 1.2 | 1.0 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| | N: | 4 | 4 | 4 | 4 | 0 | 0 | 0 | 0 |
| 21.5 TOOLE | MAX: | <5. | <1.3 | 2. | 4.1 | | | | |
| | MIN: | <5. | <1.1 | 1. | 2.2 | | | | |
| | MEAN: | 5.0 | 1.2 | 1.4 | 3.2 | 0.0 | 0.0 | 0.0 | 0.0 |
| | N: | 5 | 5 | 5 | 5 | 0 | 0 | 0 | 0 |
| 22 ABV FLHEAD | MAX: | <5. | <1.1 | 3. | 2.7 | | | | |
| | MIN: | <5. | <1.1 | 3. | 2.7 | | | | |
| | MEAN: | 5.0 | 1.1 | 3.0 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 |
| | N: | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 26 T FALLS | MAX: | <5. | <2.0 | 15. | 5.5 | <20. | <50. | 23.5 | <10. |
| | MIN: | <5. | <1.2 | 1. | 2.3 | <20. | <50. | <12.0 | <10. |
| | MEAN: | 5.0 | 1.5 | 4.8 | 3.6 | 20.0 | 50.0 | 17.9 | 10.0 |
| | N: | 11 | 11 | 11 | 11 | 3 | 8 | 5 | 3 |
| 28 NOXON | MAX: | 7. | <2.0 | 10. | 13.2 | <20. | 80. | 39.6 | <10. |
| | MIN: | <5. | <1.2 | 3. | 0.7 | <20. | <50. | 17.0 | <10. |
| | MEAN: | 5.6 | 1.5 | 6.7 | 6.2 | 20.0 | 55.5 | 30.4 | 10.0 |
| | N: | 17 | 17 | 17 | 17 | 1 | 11 | 10 | 1 |
| 30 CAB GORGE | MAX: | <5. | <2.0 | 5. | 7.7 | <20. | <50. | 24.9 | <10. |
| | MIN: | <5. | <1.2 | 1. | 2.1 | <20. | <50. | <12.0 | <10. |
| | MEAN: | 5.0 | 1.5 | 3.2 | 4.4 | 20.0 | 50.0 | 17.0 | 10.0 |
| | N: | 12 | 12 | 12 | 12 | 3 | 9 | 6 | 3 |

NOTE: ALL VALUES ARE IN UG/G. IN THE HEADINGS, T.R. MEANS TOTAL RECOVERABLE AND TOT MEANS TOTAL.
VALUES LESS THAN THE DETECTION LIMIT ARE TAKEN TO BE AT THE DETECTION LIMIT FOR COMPUTATION OF THE MEAN.

TABLE 13

4. Diurnal Dissolved Oxygen Monitoring

a. Rationale

Dissolved oxygen and water temperature were measured every three hours over a 24-hour period at low flow in midsummer of 1984 and 1985. Twelve stations were established to bracket the Missoula wastewater treatment plant and Champion International with most stations clustered below the latter facility in order to pinpoint the reach of river subject to the maximum depression in dissolved oxygen. The data collected from this intensive effort will help to model and predict dissolved oxygen concentrations at different stations under varying conditions and to determine the probability of violation of the State's dissolved oxygen standard at different levels of organic loading.

b. Methods

Dissolved oxygen and water temperature were determined in the field at each of 12 stations every three hours over a 24-hour period in early August of 1984 and 1985. Dissolved oxygen was measured on water samples collected in moving water near shore using the azide modification of the Winkler method. Temperature was recorded to the nearest tenth of a degree Centigrade with a calibrated field thermometer.

c. Results

Diurnal dissolved oxygen and temperature data for the 1984 and 1985 monitoring runs are presented in Table 14. Diurnal curves of dissolved oxygen and temperature are shown in Figures 2-21. An explanation of the time-weighted mean dissolved oxygen and temperature values used in Table 14 and Figures 6, 11, 16 and 21 is given in Appendix C.

DIURNAL DISSOLVED OXYGEN AND TEMPERATURE MONITORING RESULTS
RESULTS OF SAMPLES TAKEN ON AUGUST 8-9, 1984

STATION — MEASUREMENT RESULTS

**01 TURAH**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DAY: | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | 09 |
| TIME: | 0905 | 12[illegible] | 1504 | 1803 | 2105 | 0017 | 0250 | 0601 | 0903 |
| T: | 15.50 | 17.[illegible] | 20.00 | 21.00 | 19.50 | 18.50 | 17.50 | 16.50 | 17.00 |
| D.O.: | 8.50 | 9.[illegible] | 9.60 | 9.00 | 8.00 | 7.50 | 7.60 | 7.90 | 8.70 |

TIME-WEIGHTED MEAN D.O. = 8.48; TIME-WEIGHTED MEAN T = 18.29

**06 ABV STP**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | 09 | 09 | 09 |
| TIME: | 0938 | 122[illegible] | 1531 | 1651 | 1834 | 1932 | 2139 | 0046 | 0340 | 0500 | 0624 | 0738 | 0946 |
| T: | 18.00 | 19.[illegible] | 20.00 | 20.00 | 19.50 | 19.00 | 18.50 | 18.50 | 18.50 | 18.50 | 19.00 | 19.00 | 19.50 |
| D.O.: | 8.60 | 9.[illegible] | 9.80 | 9.80 | 9.70 | 9.50 | 9.00 | 8.10 | 7.90 | 7.90 | 7.90 | 8.00 | 8.50 |

TIME-WEIGHTED MEAN D.O. = 8.81; TIME-WEIGHTED MEAN T = 18.96

**09 SHUFFIELDS**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | 09 | 09 | 09 |
| TIME: | 1002 | 124[illegible] | 1551 | 1709 | 1850 | 2200 | 0109 | 0404 | 0519 | 0647 | 0726 | 1004 |
| T: | 18.50 | 19.5[illegible] | 20.50 | 20.50 | 20.00 | 19.00 | 18.00 | 18.00 | 18.00 | 18.50 | 19.00 | 19.00 |
| D.O.: | 8.70 | 9.[illegible] | 9.75 | 9.70 | 9.50 | 8.40 | 7.90 | 7.70 | 7.80 | 7.80 | 7.70 | 8.50 |

TIME-WEIGHTED MEAN D.O. = 8.61; TIME-WEIGHTED MEAN T = 19.07

**11 HARPER BR**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | 09 | 09 |
| TIME: | 0905 | 120[illegible] | 1500 | 1600 | 1755 | 1900 | 2100 | 2400 | 0300 | 0430 | 0530 | 0600 | 0845 |
| T: | 17.00 | 18.[illegible] | 20.00 | 20.50 | 21.30 | 21.50 | 21.00 | 20.00 | 18.80 | 18.50 | 18.00 | 17.80 | 17.40 |
| D.O.: | 7.90 | 8.[illegible] | 9.72 | 9.85 | 9.90 | 9.75 | 9.12 | 8.00 | 7.50 | 7.40 | 7.38 | 7.40 | 7.70 |

TIME-WEIGHTED MEAN D.O. = 8.55; TIME-WEIGHTED MEAN T = 19.33

**15 HUSON**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | 09 | 09 |
| TIME: | 0945 | 124[illegible] | 1530 | 1630 | 1830 | 1930 | 2135 | 0035 | 0340 | 0500 | 0630 | 0915 |
| T: | 17.80 | 18.[illegible] | 20.40 | 20.70 | 21.10 | 21.00 | 20.80 | 20.30 | 19.70 | 19.40 | 18.80 | 18.30 |
| D.O.: | 8.10 | 8.[illegible] | 9.55 | 9.72 | 9.80 | 9.76 | 9.10 | 8.20 | 7.70 | 7.50 | 7.50 | 7.75 |

TIME-WEIGHTED MEAN D.O. = 8.60; TIME-WEIGHTED MEAN T = 19.75

**17 ABV ALBERT**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | 09 |
| TIME: | 0850 | 114[illegible] | 1415 | 1630 | 1805 | 2045 | 2355 | 0255 | 0510 | 0715 | 0840 |
| T: | 17.50 | 19.[illegible] | 20.00 | 20.00 | 20.00 | 19.50 | 18.00 | 18.00 | 17.00 | 18.00 | 18.00 |
| D.O.: | 8.00 | 8.[illegible] | 8.90 | 9.35 | 9.30 | 8.90 | 8.10 | 7.80 | 7.50 | 7.40 | 7.80 |

TIME-WEIGHTED MEAN D.O. = 8.39; TIME-WEIGHTED MEAN T = 18.71

**19 LOZEAU**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | 09 | 09 |
| TIME: | 0930 | 123[illegible] | 1450 | 1700 | 1845 | 2125 | 0035 | 0335 | 0550 | 0745 | 0925 |
| T: | 15.00 | 18.[illegible] | 19.50 | 19.50 | 19.00 | 18.00 | 17.00 | 17.00 | 17.00 | 17.00 | 17.50 |
| D.O.: | 8.60 | 8.[illegible] | 9.72 | 10.00 | 9.95 | 9.00 | 8.05 | 7.80 | 7.85 | 7.80 | 7.90 |

TIME-WEIGHTED MEAN D.O. = 8.72; TIME-WEIGHTED MEAN T = 17.80

NOTE: TEMPERATURE UNITS ARE DEGREES CELCIUS AND DISSOLVED OXYGEN UNITS ARE MG/L.

TABLE 14

DIURNAL DISSOLVED OXYGEN AND TEMPERATURE MONITORING RESULTS
RESULTS OF SAMPLES TAKEN ON AUGUST 8-9, 1984

| STATION | MEASUREMENT RESULTS | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 LAVISTA | DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | 09 | 09 | 09 |
| | TIME: | 0850 | 1150 | 1450 | 1550 | 1655 | 1750 | 1850 | 1950 | 2050 | 0350 | 0450 | 0550 | 0650 | 0750 | 0850 |
| | T: | 16.50 | 18.50 | 20.50 | 21.00 | 21.00 | 21.00 | 21.00 | 20.50 | 20.00 | 18.00 | 17.50 | 17.00 | 17.00 | 17.00 | 17.00 |
| | D.O.: | 7.95 | 9.10 | 10.10 | 10.30 | 10.35 | 10.40 | 10.35 | 10.15 | 10.00 | 7.80 | 7.80 | 7.80 | 7.80 | 7.80 | 7.90 |
| | TIME-WEIGHTED MEAN D.O. = 9.06; TIME-WEIGHTED MEAN T = 18.95 | | | | | | | | | | | | | | | |
| 21 BEL ST REG | DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | 09 | 09 | 09 |
| | TIME: | 0920 | 1210 | 1510 | 1615 | 1715 | 1815 | 1915 | 2015 | 2115 | 0420 | 0515 | 0610 | 0715 | 0810 | 0915 |
| | T: | 17.00 | 20.00 | 21.00 | 21.50 | 21.00 | 21.00 | 21.00 | 20.00 | 19.50 | 18.00 | 17.50 | 17.00 | 17.50 | 17.50 | 17.50 |
| | D.O.: | 8.70 | 9.70 | 10.30 | 10.35 | 10.35 | 10.40 | 10.30 | 9.40 | 9.20 | 7.85 | 7.80 | 7.70 | 7.80 | 8.40 | 8.60 |
| | TIME-WEIGHTED MEAN D.O. = 9.08; TIME-WEIGHTED MEAN T = 19.19 | | | | | | | | | | | | | | | |
| 22 ABV FLATHD | DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | | | | | | |
| | TIME: | 0945 | 1230 | 1525 | 1830 | 2115 | 2345 | 0330 | 0615 | 0920 | | | | | | |
| | T: | 18.00 | 19.00 | 19.50 | 19.50 | 19.00 | 19.00 | 18.40 | 18.00 | 18.00 | | | | | | |
| | D.O.: | 8.50 | 9.15 | 9.40 | 9.35 | 8.90 | 8.50 | 8.00 | 7.70 | 8.20 | | | | | | |
| | TIME-WEIGHTED MEAN D.O. = 8.65; TIME-WEIGHTED MEAN T = 18.78 | | | | | | | | | | | | | | | |
| 23 FLATHEAD R | DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | | | | | | |
| | TIME: | 0915 | 1200 | 1500 | 1810 | 2100 | 2330 | 0310 | 0600 | 0900 | | | | | | |
| | T: | 19.60 | 21.00 | 23.00 | 23.50 | 23.00 | 23.00 | 22.00 | 21.00 | 22.00 | | | | | | |
| | D.O.: | 8.25 | 10.10 | 13.08 | 10.75 | 9.75 | 8.20 | 7.55 | 6.90 | 8.25 | | | | | | |
| | TIME-WEIGHTED MEAN D.O. = 9.31; TIME-WEIGHTED MEAN T = 22.16 | | | | | | | | | | | | | | | |
| 24 PLAINS | DAY: | 08 | 08 | 08 | 08 | 08 | 08 | 09 | 09 | 09 | | | | | | |
| | TIME: | 1015 | 1305 | 1555 | 1915 | 2135 | 2400 | 0400 | 0640 | 0950 | | | | | | |
| | T: | 20.20 | 21.00 | 21.30 | 21.70 | 21.00 | 21.00 | 20.50 | 20.00 | 21.00 | | | | | | |
| | D.O.: | 8.42 | 8.70 | 8.95 | 9.05 | 8.75 | 8.45 | 8.15 | 8.05 | 8.35 | | | | | | |
| | TIME-WEIGHTED MEAN D.O. = 8.54; TIME-WEIGHTED MEAN T = 20.88 | | | | | | | | | | | | | | | |

NOTE: TEMPERATURE UNITS ARE DEGREES CELCIUS AND DISSOLVED OXYGEN UNITS ARE MG/L.

TABLE 14

DIURNAL DISSOLVED OXYGEN AND TEMPERATURE MONITORING RESULTS
RESULTS OF SAMPLES TAKEN ON AUGUST 7-8, 1985

| STATION | MEASUREMENT RESULTS | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 TURAH | DAY: | 07 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 | 08 | | |
| | TIME: | 0847 | 1149 | 1344 | 1512 | 1803 | 2128 | 0010 | 0258 | 0427 | 0612 | 0852 | | |
| | T: | 14.50 | 16.00 | 17.00 | 19.00 | 19.50 | 18.00 | 17.00 | 16.50 | 16.00 | 15.50 | 14.50 | | |
| | D.O.: | 7.90 | 9.90 | 10.10 | 10.40 | 9.10 | 7.50 | 7.30 | 7.40 | 7.40 | 7.70 | 8.80 | | |
| | TIME-WEIGHTED MEAN D.O. = 8.47; TIME-WEIGHTED MEAN T = 16.99 | | | | | | | | | | | | | |
| 06 ABV STP | DAY: | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 | 08 | |
| | TIME: | 0918 | 1226 | 1411 | 1539 | 1733 | 1838 | 2203 | 0040 | 0329 | 0458 | 0652 | 0923 | |
| | T: | 18.00 | 19.50 | 20.50 | 21.00 | 21.50 | 21.00 | 18.00 | 17.00 | 16.50 | 16.50 | 16.00 | 17.00 | |
| | D.O.: | 8.20 | 9.00 | 9.40 | 9.60 | 9.60 | 9.40 | 8.20 | 7.90 | 7.80 | 7.80 | 7.90 | 8.30 | |
| | TIME-WEIGHTED MEAN D.O. = 8.54; TIME-WEIGHTED MEAN T = 18.44 | | | | | | | | | | | | | |
| 09 SHUFFIELDS | DAY: | 07 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 | 08 | | |
| | TIME: | 0941 | 1238 | 1424 | 1556 | 1855 | 2221 | 0100 | 0348 | 0511 | 0710 | 0940 | | |
| | T: | 17.50 | 19.00 | 20.50 | 21.00 | 21.00 | 18.00 | 17.50 | 16.50 | 16.50 | 16.00 | 16.50 | | |
| | D.O.: | 8.25 | 9.30 | 10.00 | 9.90 | 9.40 | 8.80 | 7.60 | 7.60 | 7.70 | 7.80 | 8.20 | | |
| | TIME-WEIGHTED MEAN D.O. = 8.64; TIME-WEIGHTED MEAN T = 18.36 | | | | | | | | | | | | | |
| 11 HARPER BR | DAY: | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 | | |
| | TIME: | 0900 | 1130 | 1400 | 1600 | 1800 | 1930 | 2130 | 0245 | 0415 | 0530 | 0800 | | |
| | T: | 16.80 | 17.00 | 18.10 | 19.10 | 19.80 | 19.80 | 19.40 | 18.30 | 18.00 | 17.70 | 16.70 | | |
| | D.O.: | 7.30 | 8.97 | 10.60 | 11.25 | 11.60 | 11.25 | 9.70 | 7.25 | 6.90 | 6.80 | 7.00 | | |
| | TIME-WEIGHTED MEAN D.O. = 8.99; TIME-WEIGHTED MEAN T = 18.31 | | | | | | | | | | | | | |
| 15 HUSON | DAY: | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 | 08 | 08 |
| | TIME: | 0930 | 1200 | 1430 | 1630 | 1830 | 1900 | 2200 | 0320 | 0450 | 0600 | 0710 | 0830 | 0900 |
| | T: | 17.70 | 18.10 | 19.40 | 20.00 | 19.90 | 19.70 | 18.80 | 18.00 | 17.90 | 17.80 | 17.80 | 17.60 | 17.60 |
| | D.O.: | 7.40 | 8.65 | 10.10 | 10.85 | 10.95 | 10.90 | 9.65 | 7.85 | 7.50 | 7.30 | 7.15 | 7.10 | 7.20 |
| | TIME-WEIGHTED MEAN D.O. = 8.94; TIME-WEIGHTED MEAN T = 18.60 | | | | | | | | | | | | | |
| 16 NINEMILE | DAY: | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 | 08 | |
| | TIME: | 0850 | 1145 | 1420 | 1620 | 1820 | 2050 | 2350 | 0255 | 0400 | 0515 | 0630 | 0855 | |
| | T: | 18.00 | 19.00 | 21.00 | 21.50 | 21.00 | 20.00 | 19.00 | 18.50 | 18.00 | 18.00 | 18.00 | 18.00 | |
| | D.O.: | 7.40 | 8.85 | 10.35 | 11.00 | 11.25 | 10.10 | 8.95 | 8.15 | 7.95 | 7.65 | 7.50 | 7.50 | |
| | TIME-WEIGHTED MEAN D.O. = 9.13; TIME-WEIGHTED MEAN T = 19.37 | | | | | | | | | | | | | |
| 17 ABV ALBERT | DAY: | 07 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 | 08 | 08 | |
| | TIME: | 0910 | 1205 | 1440 | 1635 | 1835 | 2110 | 0015 | 0315 | 0420 | 0535 | [illegible] | 0915 | |
| | T: | 18.00 | 19.50 | 21.00 | 21.00 | 21.00 | 20.50 | 19.50 | 19.00 | 18.50 | 18.00 | 18.00 | 18.00 | |
| | D.O.: | 8.00 | 9.30 | 10.20 | 10.55 | 10.40 | 9.45 | 8.60 | 8.00 | 7.90 | 7.65 | 7.65 | 8.15 | |
| | TIME-WEIGHTED MEAN D.O. = 9.00; TIME-WEIGHTED MEAN T = 19.58 | | | | | | | | | | | | | |

NOTE: TEMPERATURE UNITS ARE DEGREES CELCIUS AND DISSOLVED OXYGEN UNITS ARE MG/L.

TABLE 14

DIORNAL DISSOLVED OXYGEN AND TEMPERATURE MONITORING RESULTS
RESULTS OF SAMPLES TAKEN ON AUGUST 7-8, 1985

| STATION | MEASUREMENT RESULTS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 19 LOZEAU | DAY: | 07 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 |
| | TIME: | 0845 | 1200 | 1530 | 1745 | 2100 | 2355 | 0245 | 0550 | 0845 |
| | T: | 17.00 | 18.30 | 19.80 | 19.80 | 17.90 | 17.50 | 17.30 | 17.00 | 17.00 |
| | D.O.: | 8.00 | 9.25 | 9.75 | 9.90 | 8.80 | 8.25 | 8.00 | 7.70 | 7.95 |
| | TIME-WEIGHTED MEAN D.O. = 8.70; TIME-WEIGHTED MEAN T = 18.05 | | | | | | | | | |
| 20 SUPERIOR | DAY: | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 |
| | TIME: | 0930 | 1230 | 1600 | 1830 | 2130 | 0020 | 0315 | 0620 | 0930 |
| | T: | 15.80 | 17.40 | 19.40 | 19.80 | 18.30 | 17.40 | 16.50 | 16.00 | 15.90 |
| | D.O.: | 8.10 | 9.35 | 10.05 | 10.05 | 9.20 | 8.40 | 8.10 | 7.85 | 7.97 |
| | TIME-WEIGHTED MEAN D.O. = 8.86; TIME-WEIGHTED MEAN T = 17.54 | | | | | | | | | |
| 22 ABV FLATHD | DAY: | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 |
| | TIME: | 0930 | 1200 | 1445 | 1800 | 2120 | 0010 | 0315 | 0505 | 0755 |
| | T: | 16.70 | 17.80 | 19.40 | 19.40 | 17.80 | 16.20 | 16.70 | 16.70 | 15.60 |
| | D.O.: | 8.20 | 9.20 | 9.50 | 9.60 | 9.20 | 8.60 | 8.00 | 7.80 | 8.10 |
| | TIME-WEIGHTED MEAN D.O. = 8.77; TIME-WEIGHTED MEAN T = 17.51 | | | | | | | | | |
| 23 FLATHEAD R | DAY: | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 | 08 |
| | TIME: | 0843 | 1115 | 1415 | 1715 | 2145 | 0030 | 0345 | 0530 | 0815 |
| | T: | 20.00 | 20.60 | 20.60 | 21.10 | 20.00 | 19.40 | 20.00 | 19.40 | 18.90 |
| | D.O.: | 9.10 | 7.66 | 8.40 | 9.00 | 9.00 | 8.50 | 7.90 | 7.70 | 7.80 |
| | TIME-WEIGHTED MEAN D.O. = 8.40; TIME-WEIGHTED MEAN T = 20.11 | | | | | | | | | |
| 24 PLAINS | DAY: | 07 | 07 | 07 | 07 | 07 | 07 | 08 | 08 | 08 |
| | TIME: | 1000 | 1245 | 1545 | 1840 | 2045 | 2335 | 0245 | 0435 | 0720 |
| | T: | 19.40 | 20.60 | 21.10 | 20.60 | 20.00 | 19.40 | 18.90 | 18.90 | 18.90 |
| | D.O.: | 8.30 | 8.40 | 8.80 | 8.70 | 9.15 | 8.60 | 8.30 | 8.10 | 8.10 |
| | TIME-WEIGHTED MEAN D.O. = 8.50; TIME-WEIGHTED MEAN T = 19.78 | | | | | | | | | |

NOTE: TEMPERATURE UNITS ARE DEGREES CELCIUS AND DISSOLVED OXYGEN UNITS ARE MG/L.

TABLE 14

FIGURE 2

# LOWER CLARK FORK RIVER BASIN

DIURNAL MONITORING RESULTS

AUG. 8-9, 1984

MONTANA WATER QUALITY BUREAU

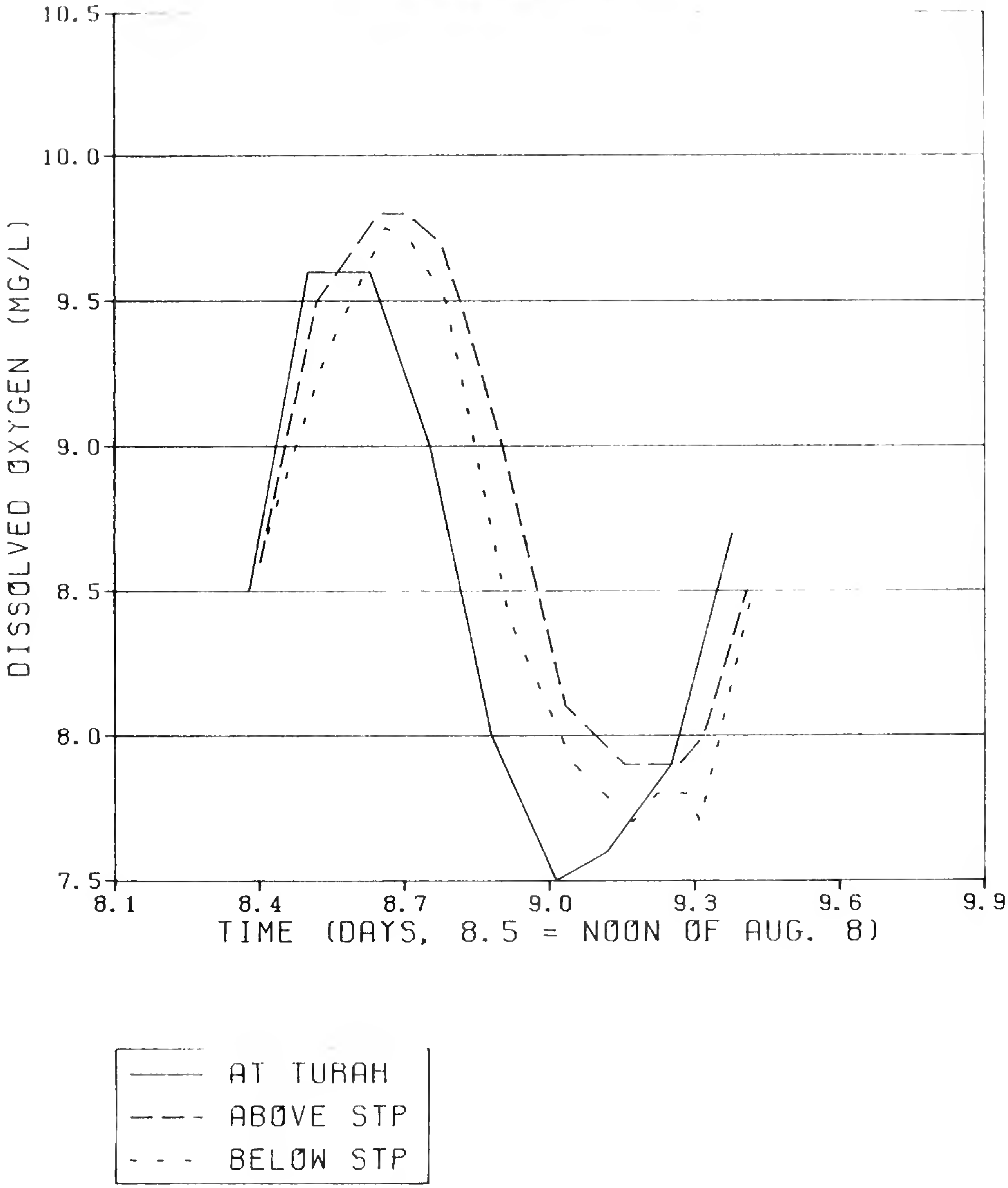


FIGURE 3

# LOWER CLARK FORK RIVER BASIN

DIURNAL MONITORING RESULTS

AUG. 8-9, 1984

MONTANA WATER QUALITY BUREAU

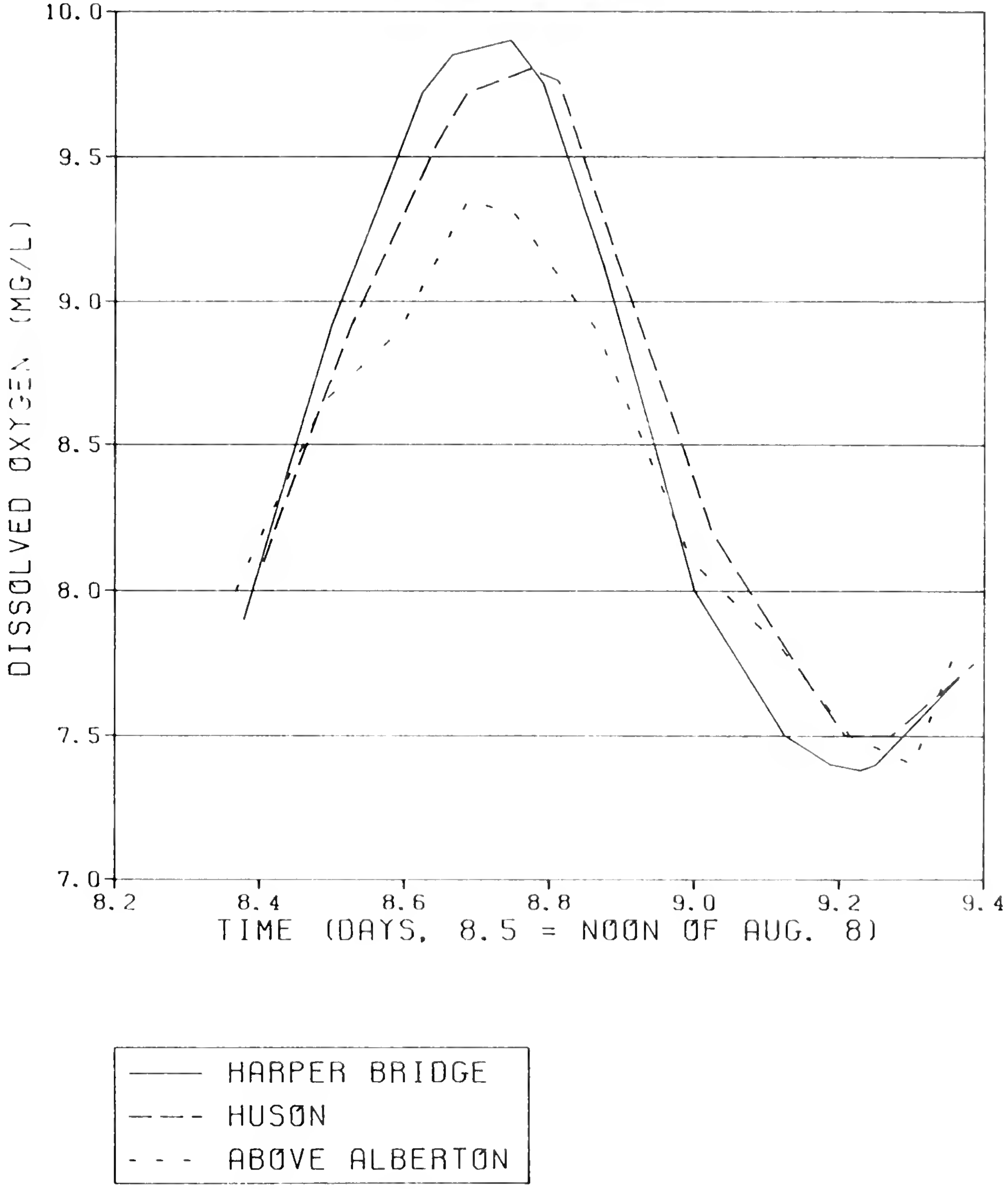


FIGURE 4

# LOWER CLARK FORK RIVER BASIN

DIURNAL MONITORING RESULTS

AUG. 8-9, 1984

MONTANA WATER QUALITY BUREAU

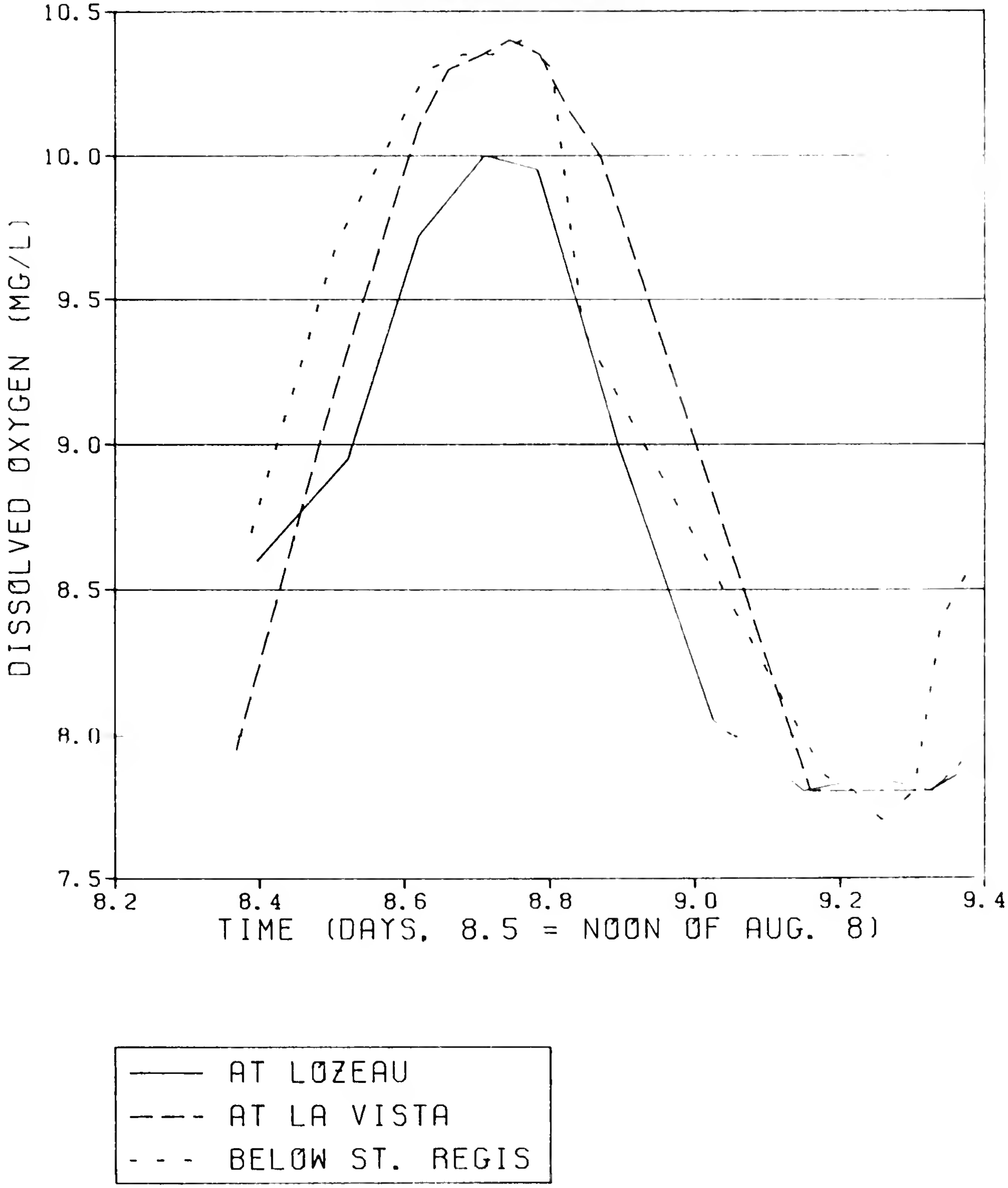


FIGURE 5

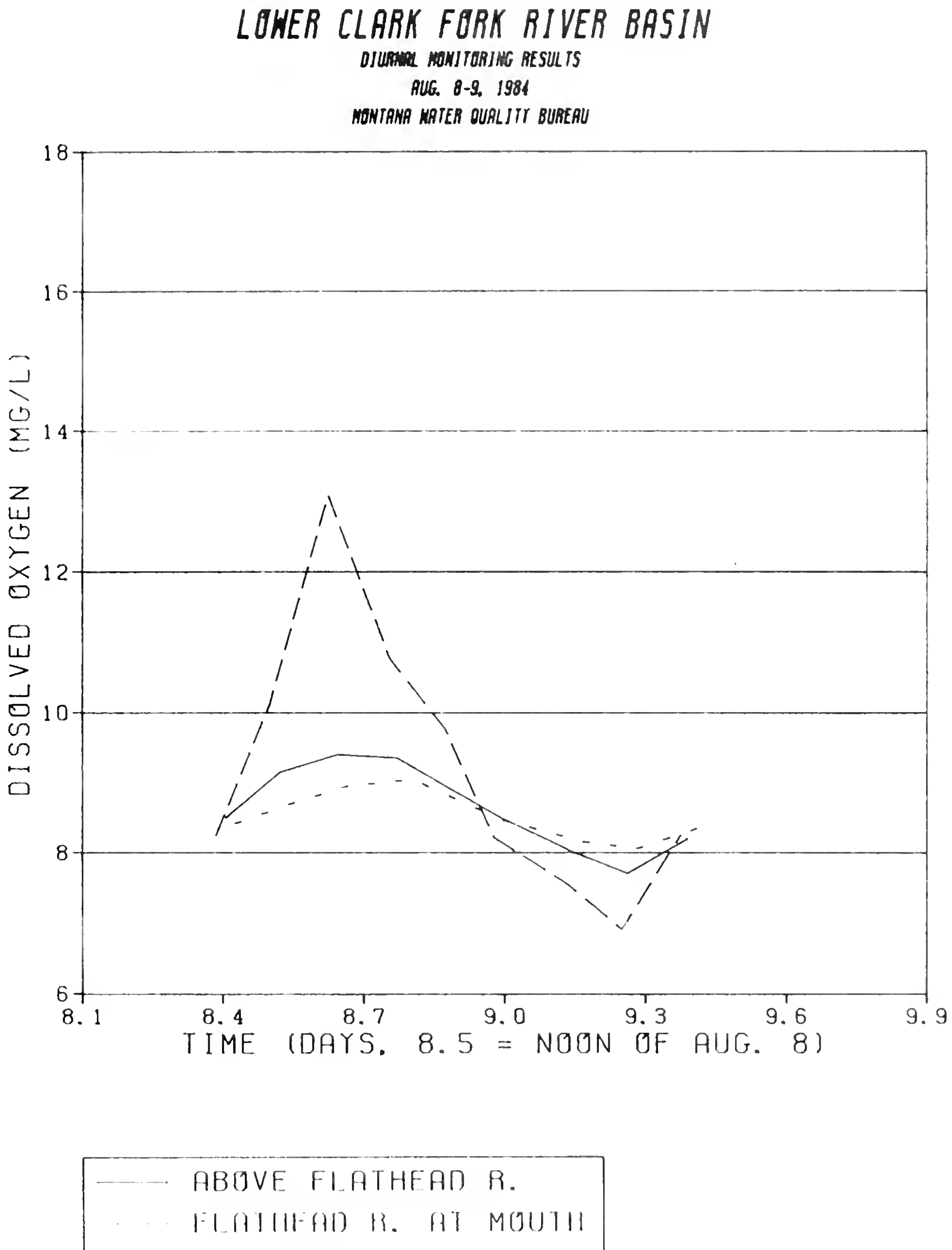

LOWER CLARK FORK RIVER BASIN
DIURNAL MONITORING RESULTS
AUG. 8-9, 1984
MONTANA WATER QUALITY BUREAU
18
16
14
12
10
8
6
DISSOLVED OXYGEN (MG/L)
8.1
8.4
8.7
9.0
9.3
9.6
9.9
TIME (DAYS, 8.5 = NOON OF AUG. 8)
ABOVE FLATHEAD R.
FLATHEAD R. AT MOUTH
AT PLAINS

FIGURE 6

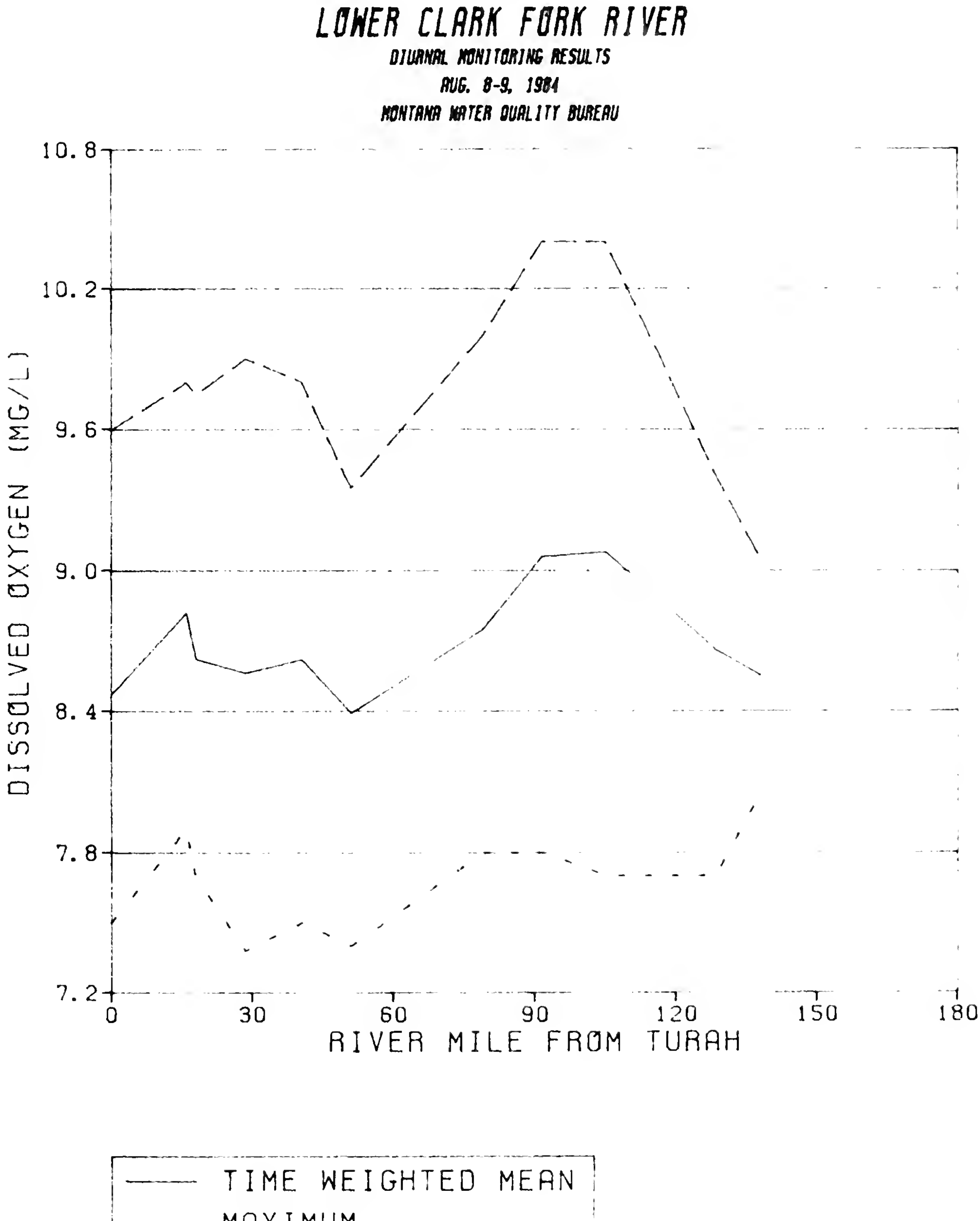

LOWER CLARK FORK RIVER
DIURNAL MONITORING RESULTS
AUG. 8-9, 1984
MONTANA WATER QUALITY BUREAU
10.8
10.2
9.6
9.0
8.4
7.8
7.2
DISSOLVED OXYGEN (MG/L)
0
30
60
90
120
150
180
RIVER MILE FROM TURAH
TIME WEIGHTED MEAN
MAXIMUM
MINIMUM

FIGURE 7

# LOWER CLARK FORK RIVER BASIN

DIURNAL MONITORING RESULTS

AUG. 8-9, 1984

MONTANA WATER QUALITY BUREAU

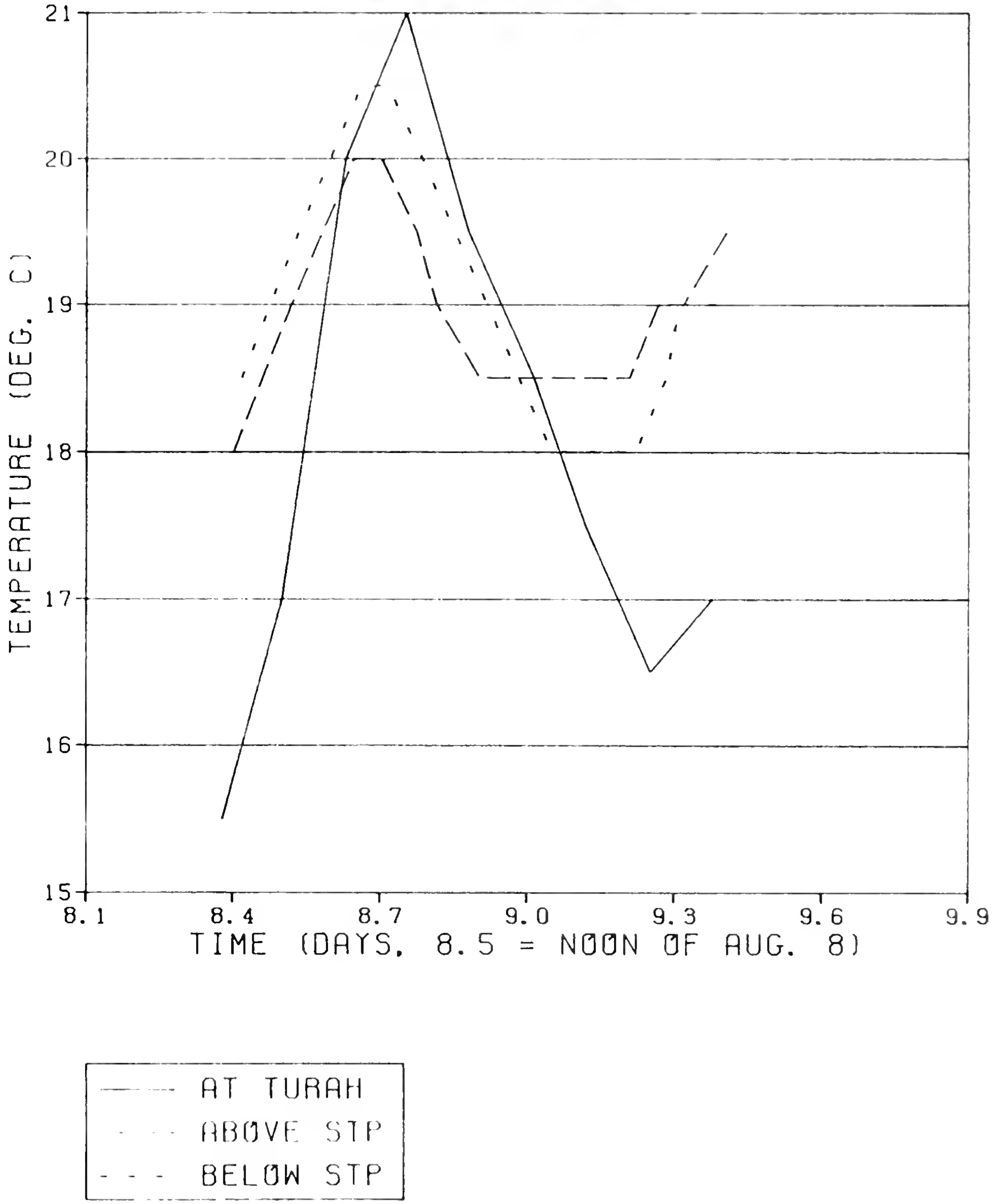


FIGURE 8

# LOWER CLARK FORK RIVER BASIN

DIURNAL MONITORING RESULTS

AUG. 8-9, 1984

MONTANA WATER QUALITY BUREAU

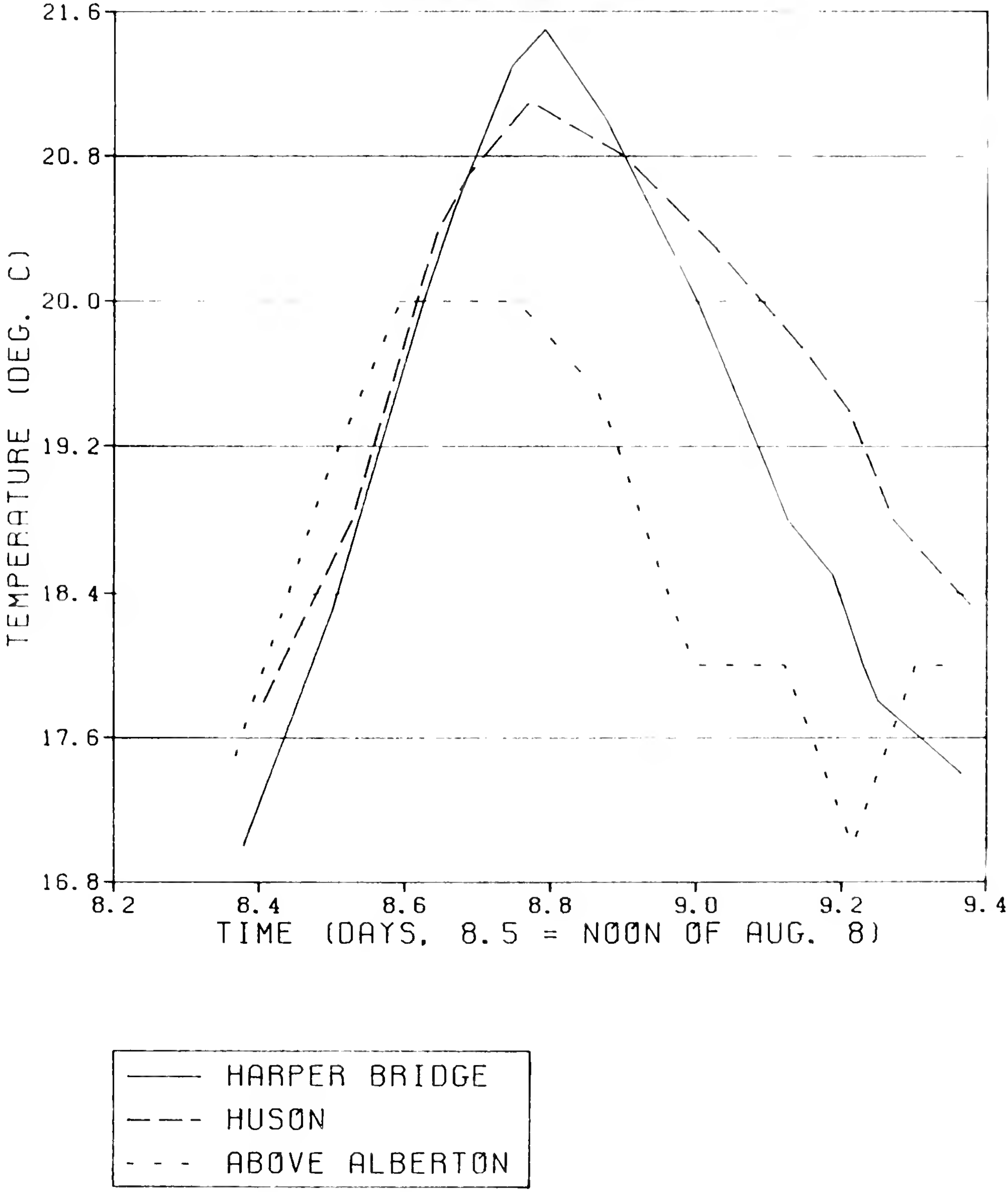


FIGURE 9

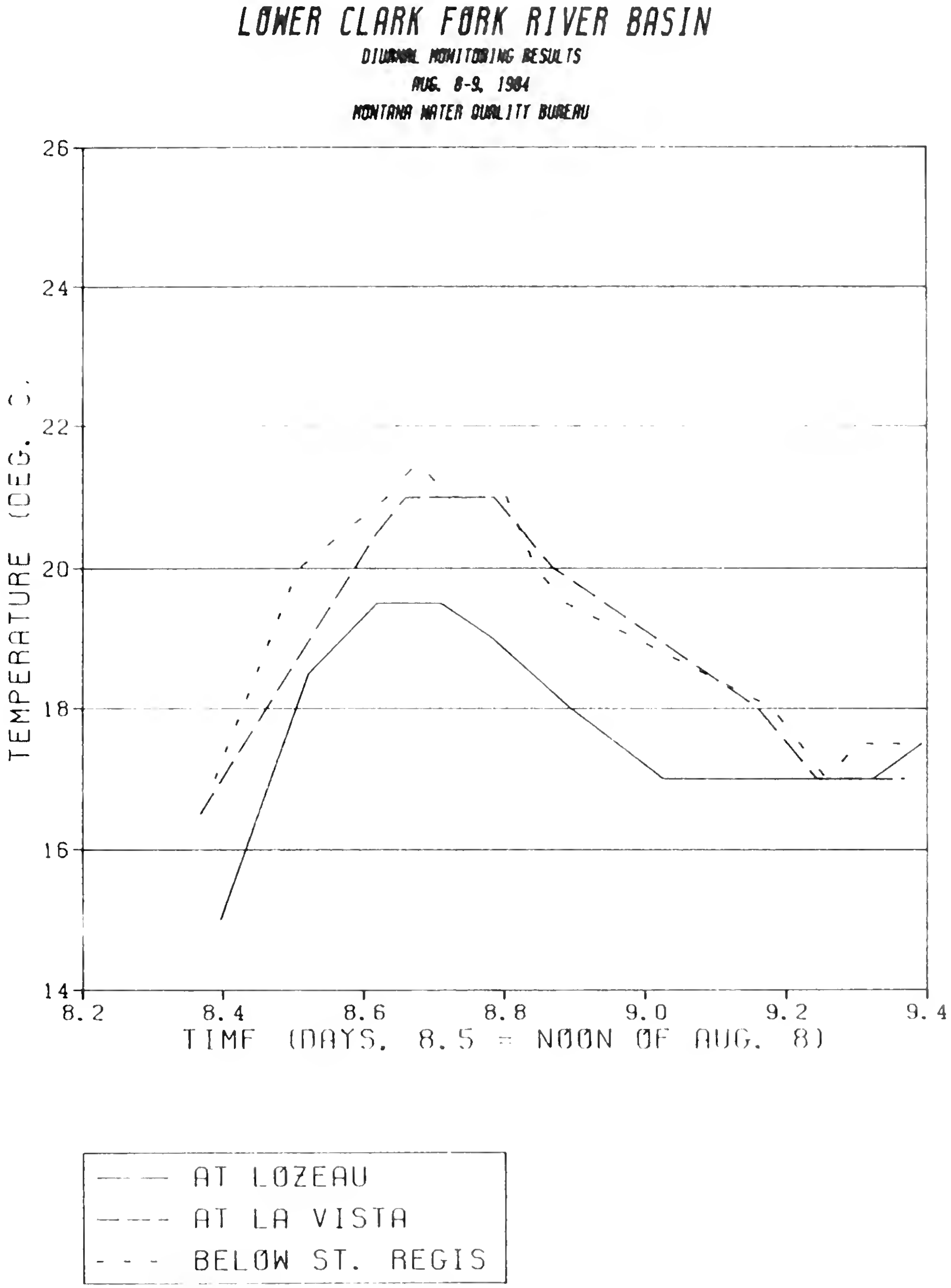

LOWER CLARK FORK RIVER BASIN
DIURNAL MONITORING RESULTS
AUG. 8-9, 1984
MONTANA WATER QUALITY BUREAU
TEMPERATURE (DEG. C)
26
24
22
20
18
16
14
8.2
8.4
8.6
8.8
9.0
9.2
9.4
TIME (DAYS, 8.5 = NOON OF AUG. 8)
AT LOZEAU
AT LA VISTA
BELOW ST. REGIS

FIGURE 10

LOWER CLARK FORK RIVER BASIN

DIURNAL MONITORING RESULTS

AUG. 8-9, 1984

MONTANA WATER QUALITY BUREAU

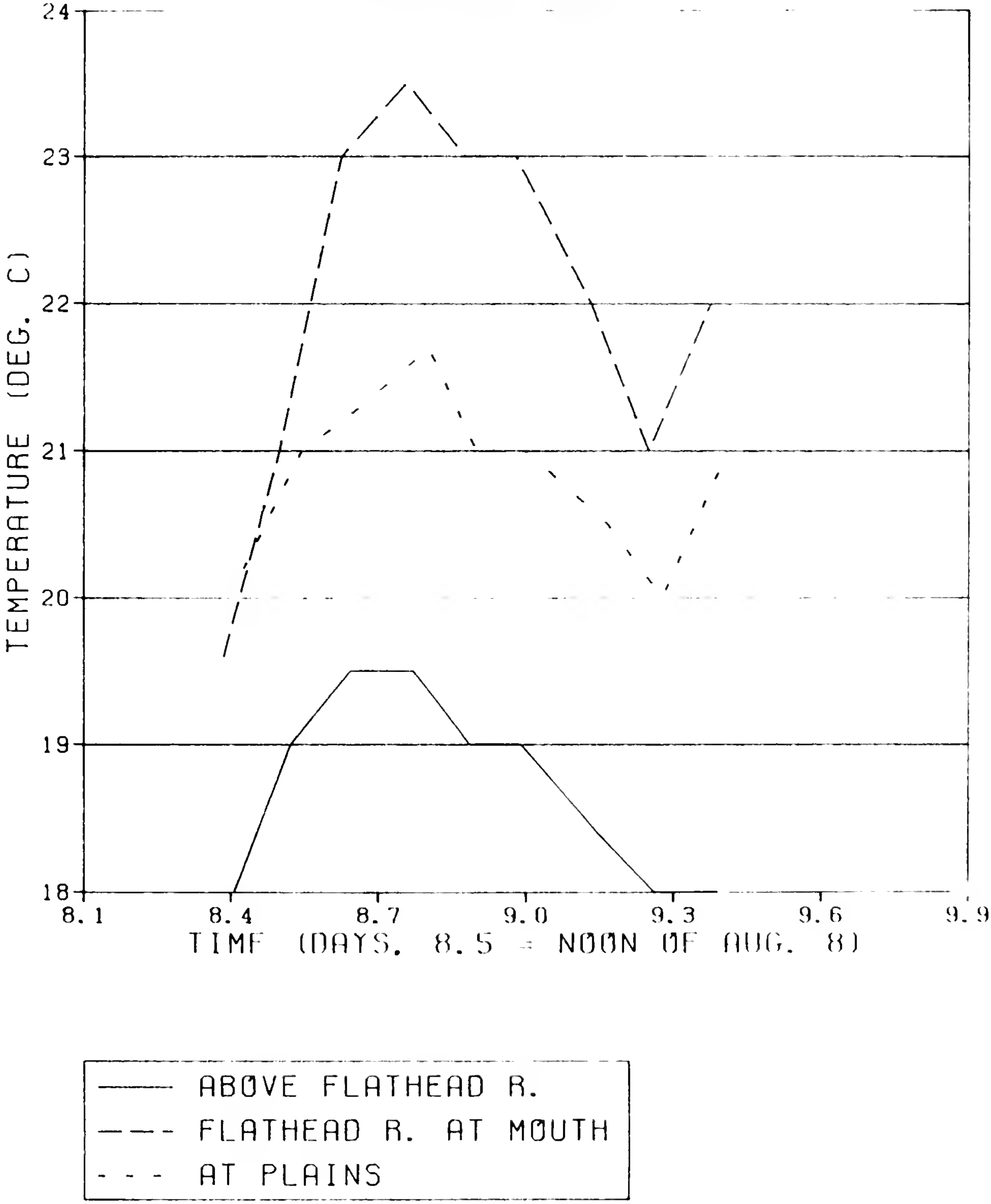


FIGURE 11

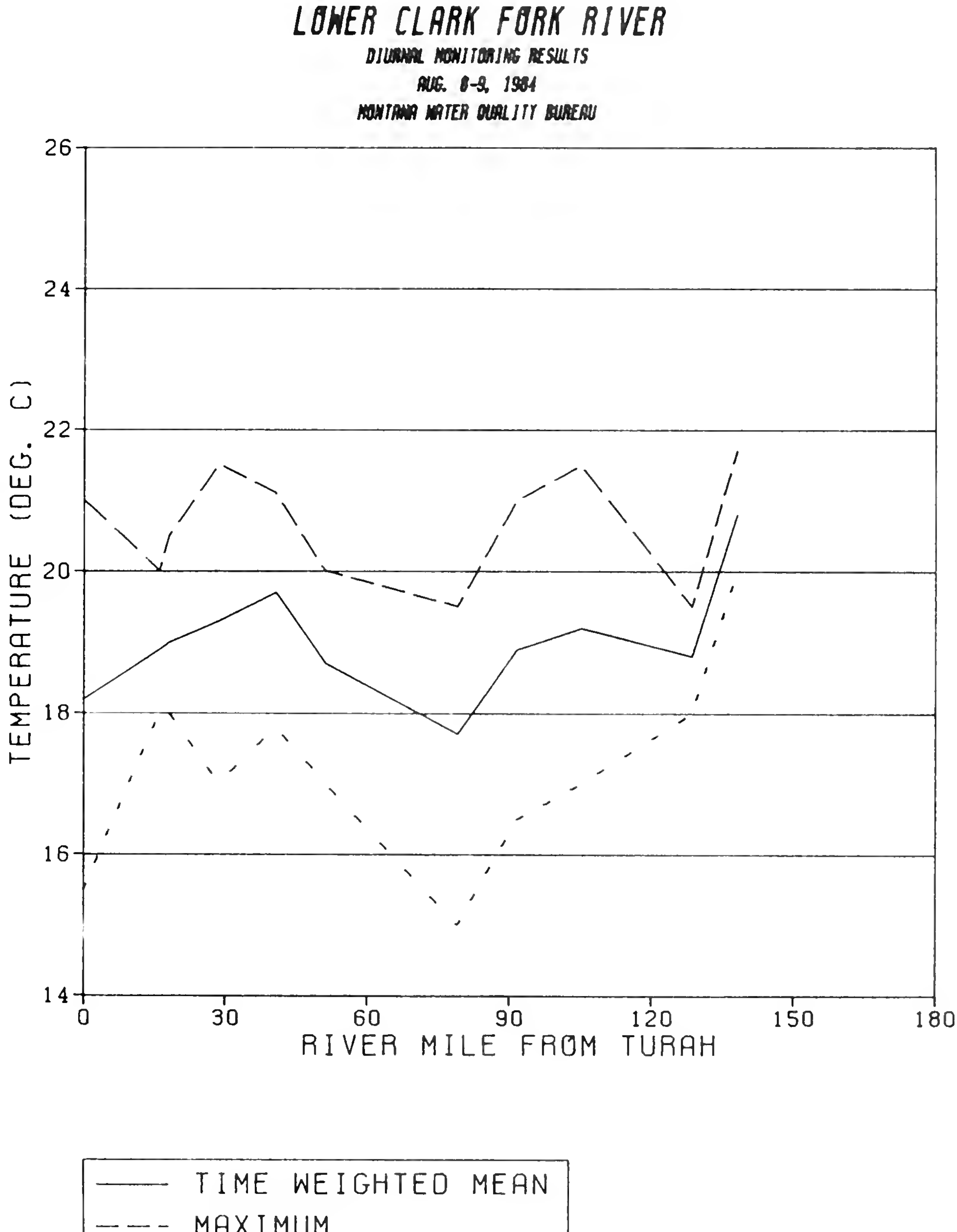

LOWER CLARK FORK RIVER
DIURNAL MONITORING RESULTS
AUG. 8-9, 1984
MONTANA WATER QUALITY BUREAU
TEMPERATURE (DEG. C)
26
24
22
20
18
16
14
0
30
60
90
120
150
180
RIVER MILE FROM TURAH
TIME WEIGHTED MEAN
MAXIMUM
MINIMUM

FIGURE 12

# LOWER CLARK FORK RIVER BASIN

DIURNAL MONITORING RESULTS

AUG. 7-8, 1985

MONTANA WATER QUALITY BUREAU

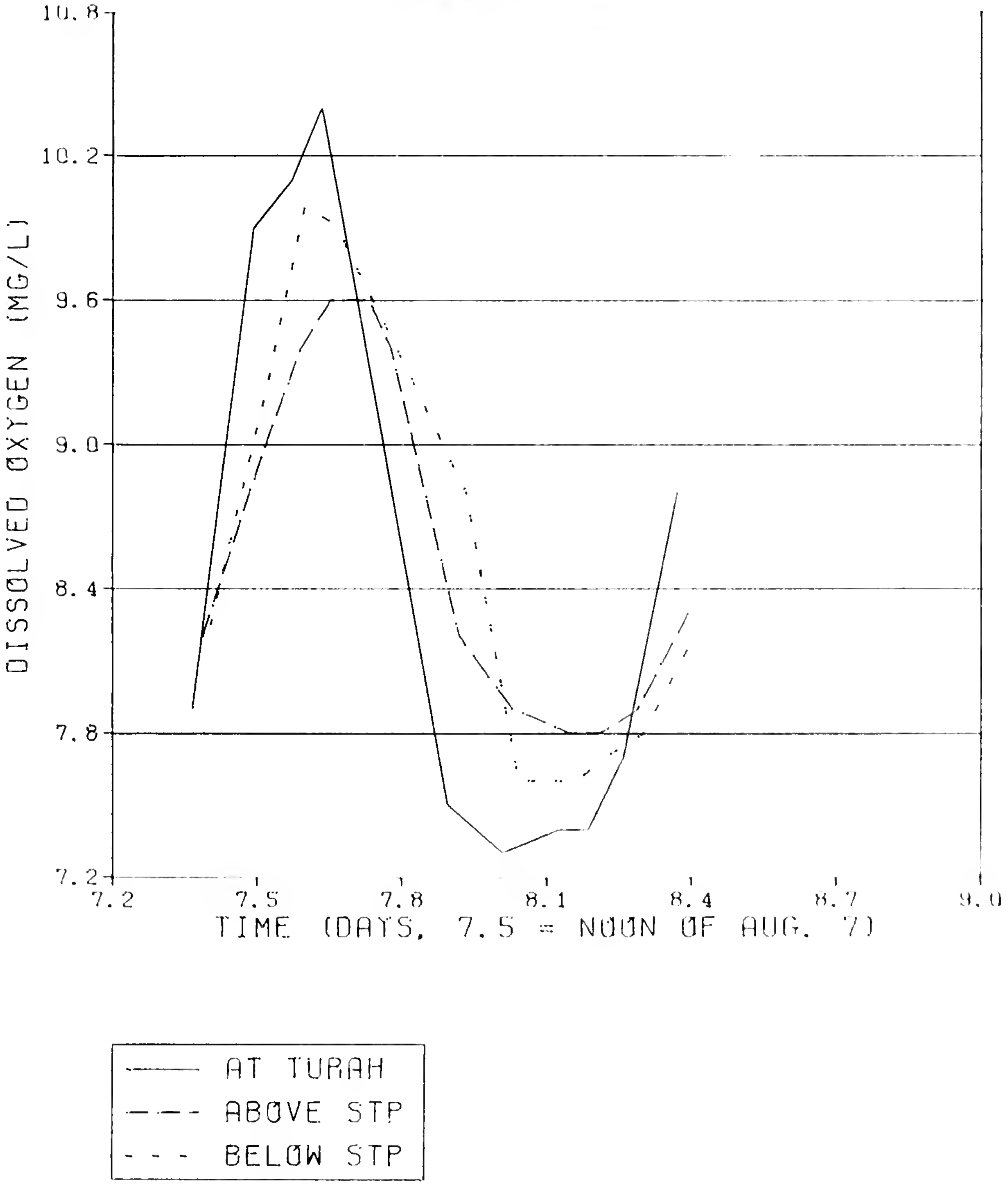


FIGURE 13

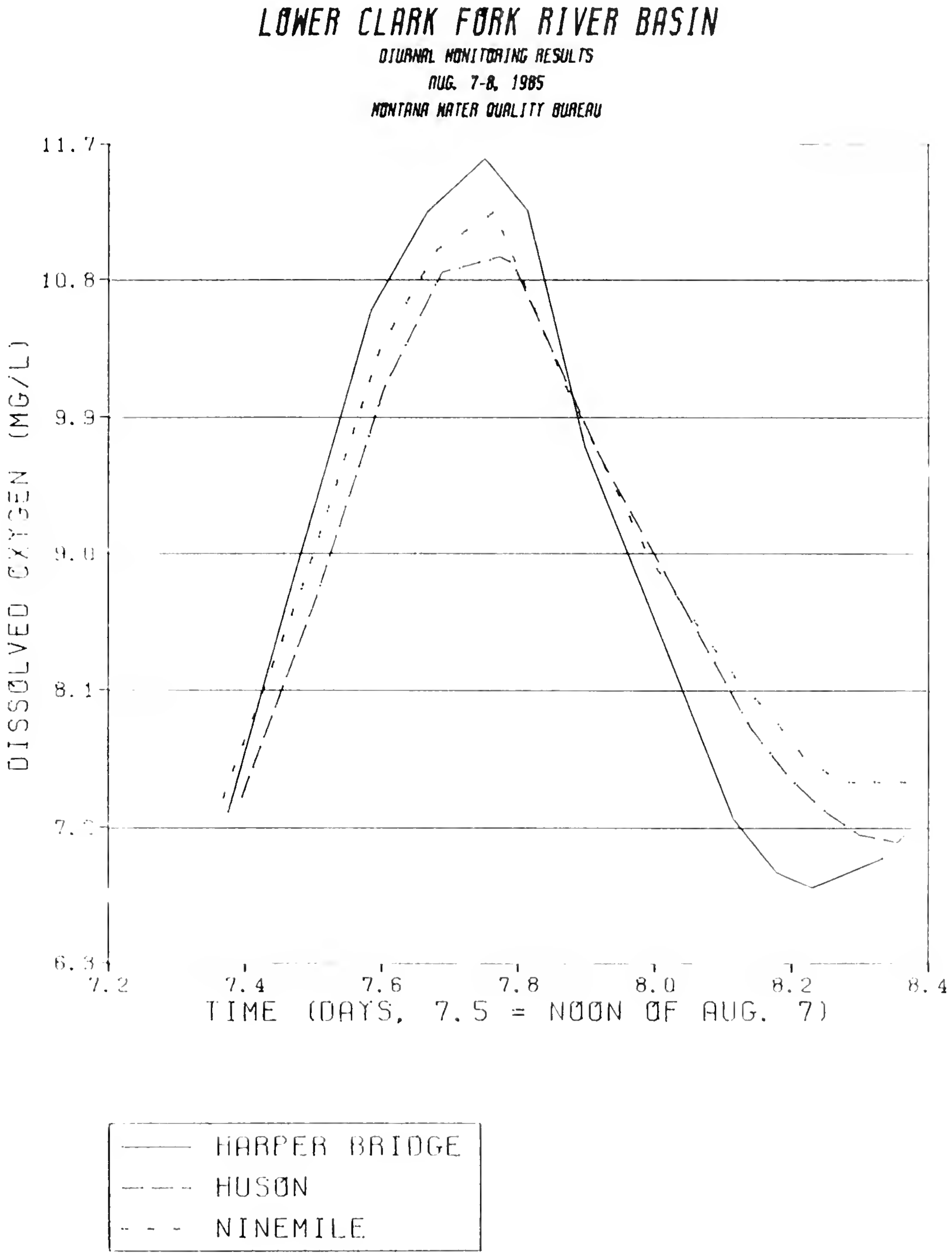

LOWER CLARK FORK RIVER BASIN
DIURNAL MONITORING RESULTS
AUG. 7-8, 1985
MONTANA WATER QUALITY BUREAU
11.7
10.8
9.9
9.0
8.1
7.2
6.3
DISSOLVED OXYGEN (MG/L)
7.2
7.4
7.6
7.8
8.0
8.2
8.4
TIME (DAYS, 7.5 = NOON OF AUG. 7)
HARPER BRIDGE
HUSON
NINEMILE

FIGURE 14

# LOWER CLARK FORK RIVER BASIN

DIURNAL MONITORING RESULTS

AUG. 7-8, 1985

MONTANA WATER QUALITY BUREAU

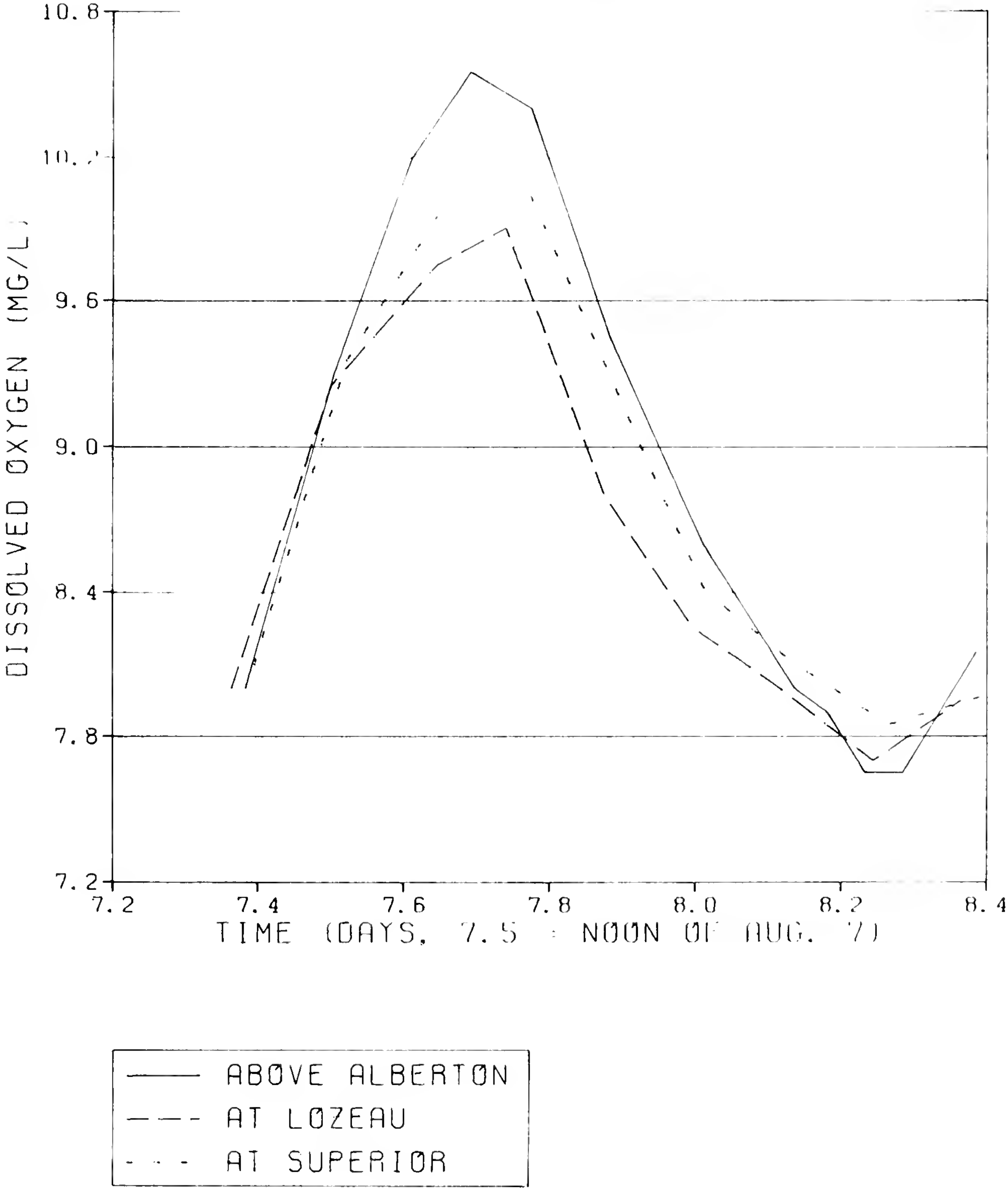


FIGURE 15

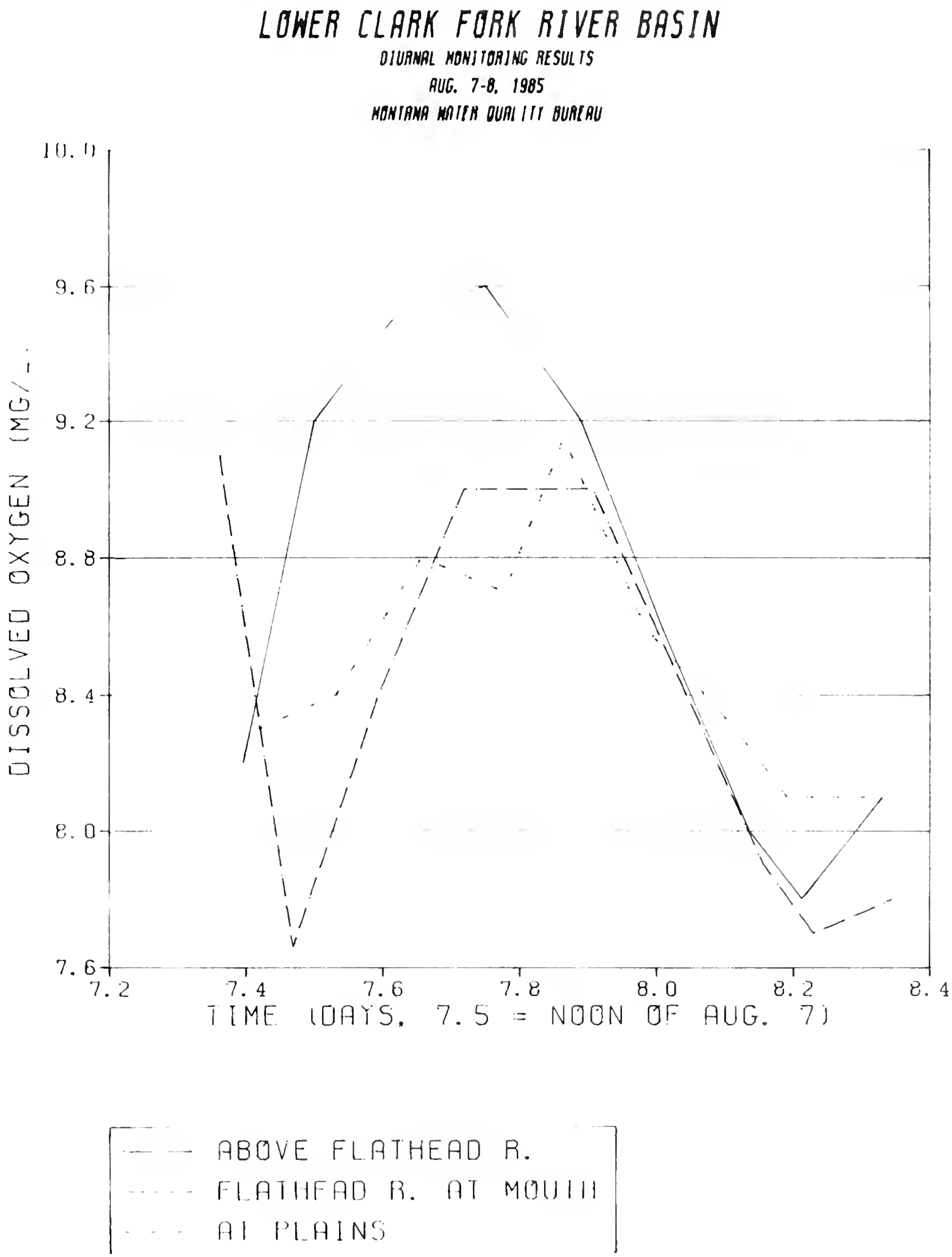

LOWER CLARK FORK RIVER BASIN
DIURNAL MONITORING RESULTS
AUG. 7-8, 1985
MONTANA WATER QUALITY BUREAU
10.0
9.6
9.2
8.8
8.4
8.0
7.6
DISSOLVED OXYGEN (MG/L)
7.2
7.4
7.6
7.8
8.0
8.2
8.4
TIME (DAYS, 7.5 = NOON OF AUG. 7)
ABOVE FLATHEAD R.
FLATHEAD R. AT MOUTH
AT PLAINS

FIGURE 16

# LØWER CLARK FØRK RIVER

DIURNAL MONITORING RESULTS

AUG. 7-8, 1985

MONTANA WATER QUALITY BUREAU

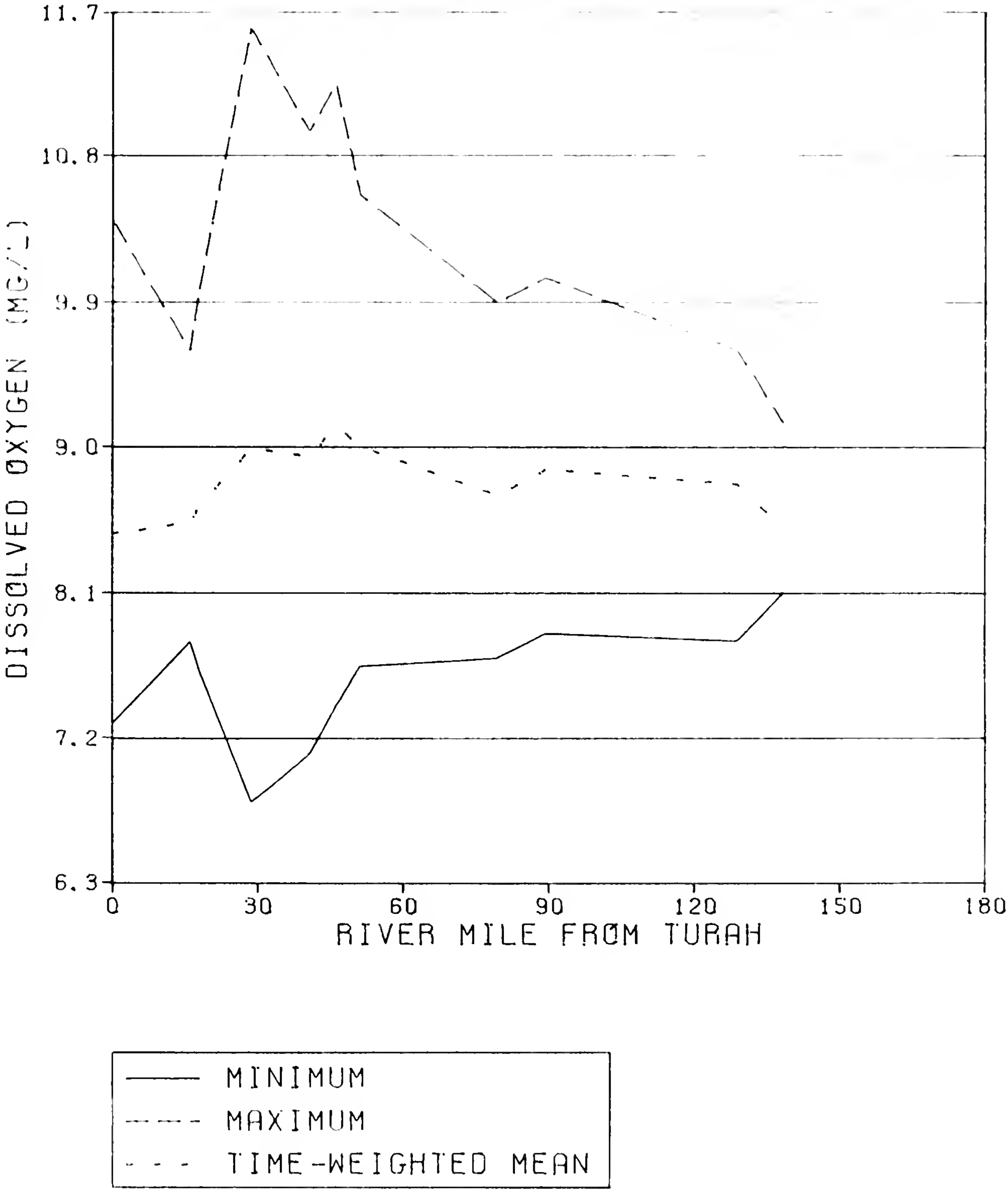


FIGURE 17

# LOWER CLARK FORK RIVER BASIN

DIURNAL MONITORING RESULTS

AUG. 7-8, 1985

MONTANA WATER QUALITY BUREAU

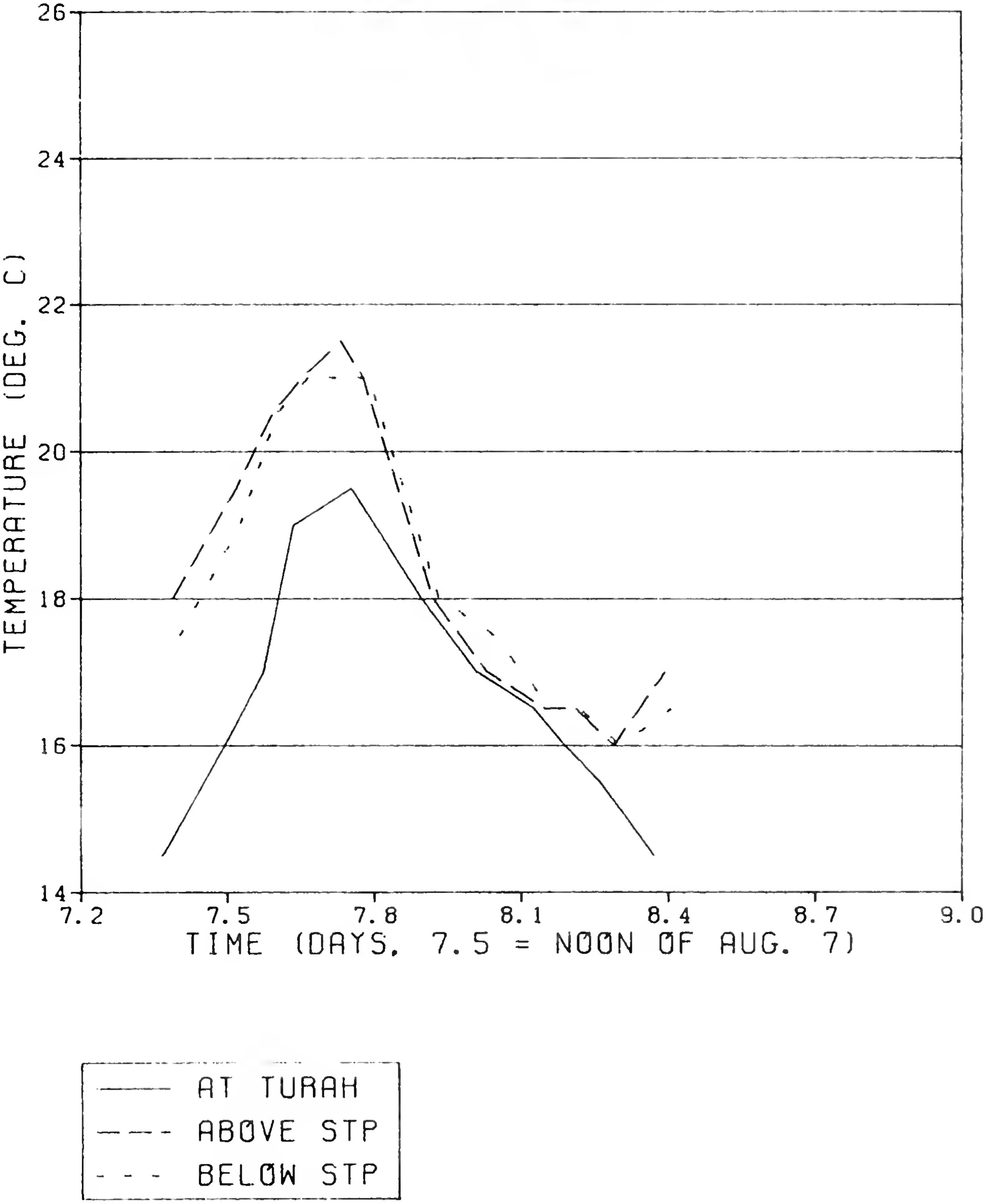


FIGURE 18

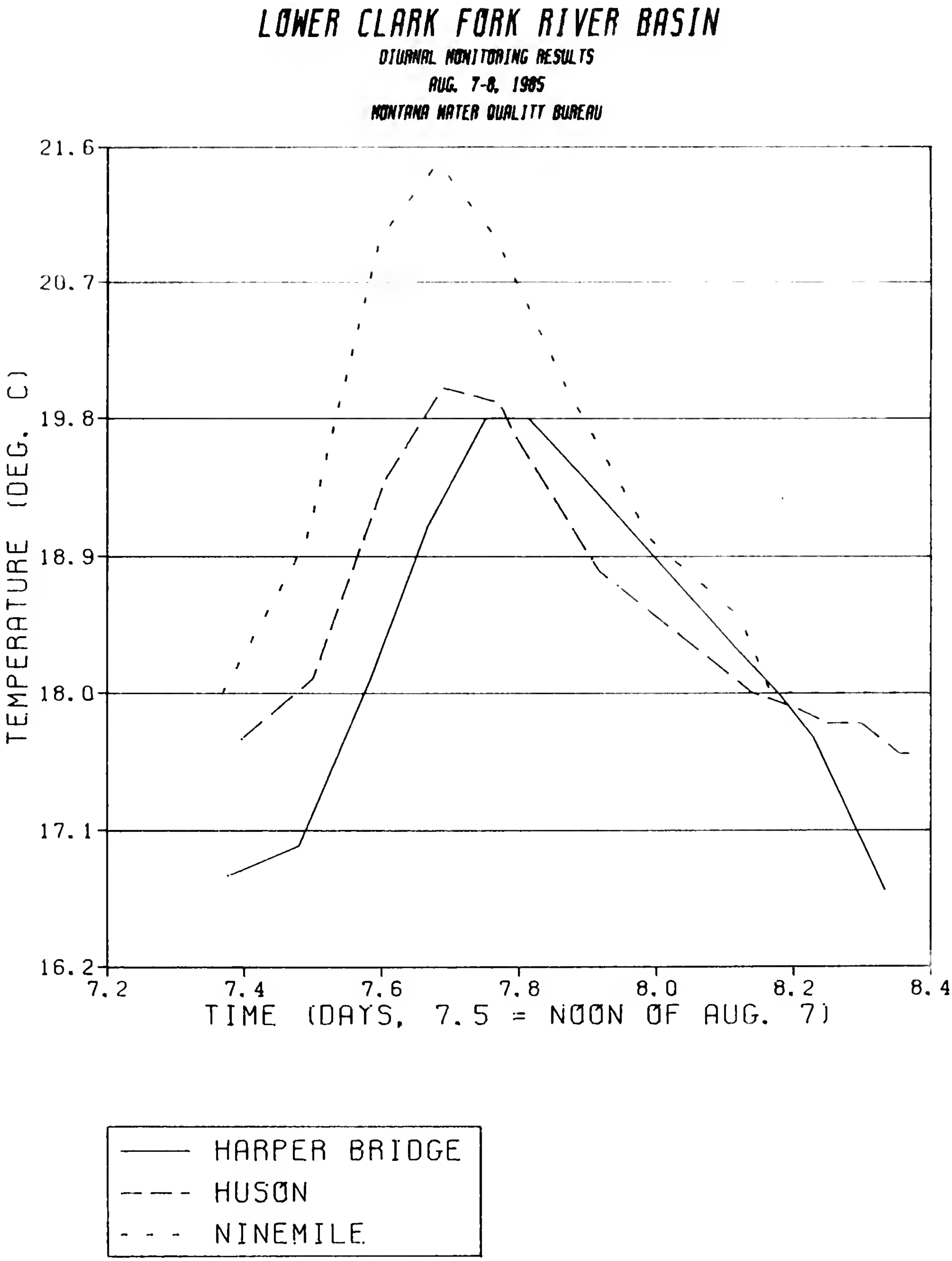

LOWER CLARK FORK RIVER BASIN
DIURNAL MONITORING RESULTS
AUG. 7-8, 1985
MONTANA WATER QUALITY BUREAU
21.6
20.7
19.8
18.9
18.0
17.1
16.2
TEMPERATURE (DEG. C)
7.2
7.4
7.6
7.8
8.0
8.2
8.4
TIME (DAYS, 7.5 = NOON OF AUG. 7)
HARPER BRIDGE
HUSON
NINEMILE

FIGURE 19

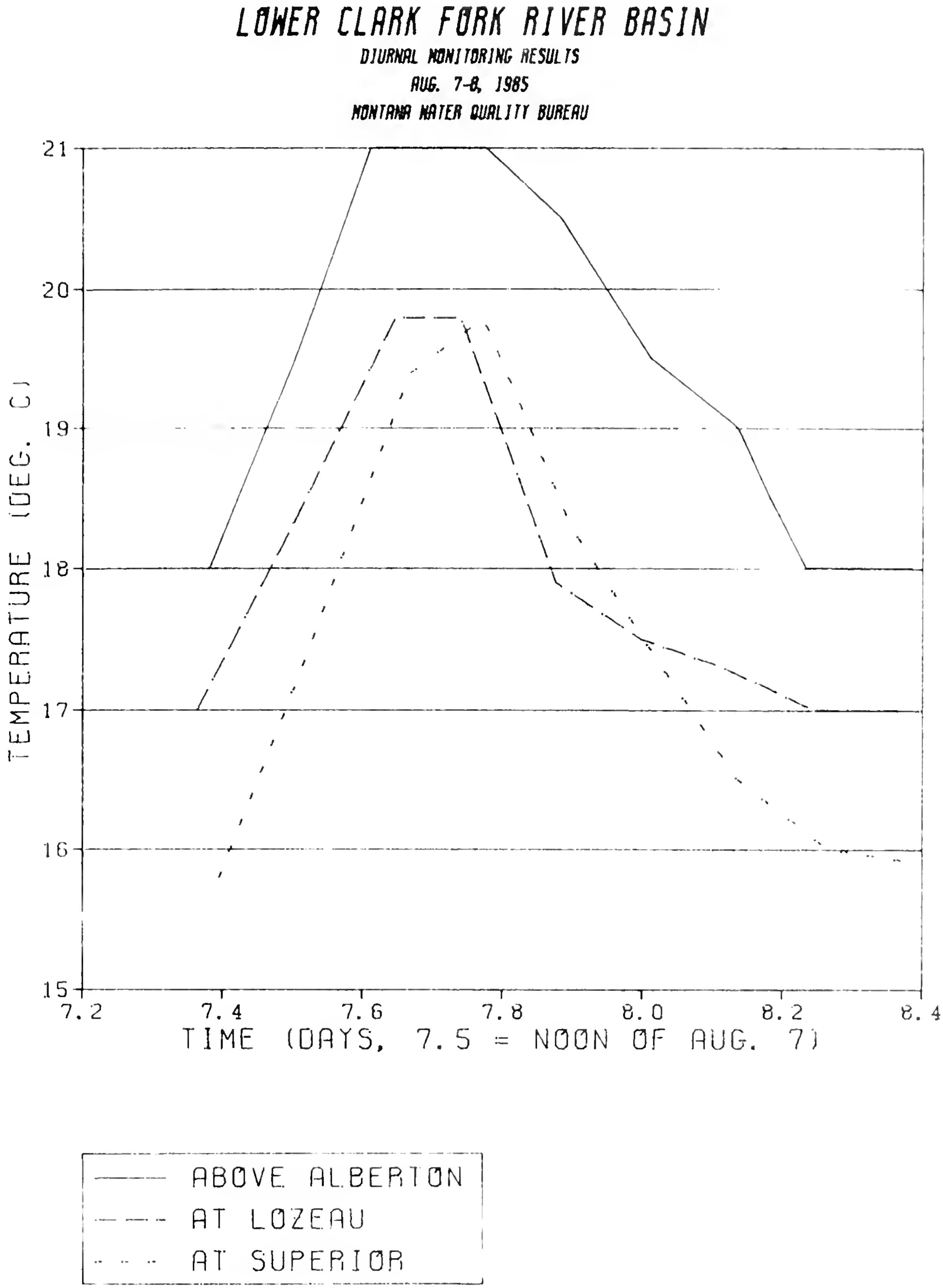

LOWER CLARK FORK RIVER BASIN
DIURNAL MONITORING RESULTS
AUG. 7-8, 1985
MONTANA WATER QUALITY BUREAU
21
20
19
18
17
16
15
TEMPERATURE (DEG. C)
7.2
7.4
7.6
7.8
8.0
8.2
8.4
TIME (DAYS, 7.5 = NOON OF AUG. 7)
ABOVE ALBERTON
AT LOZEAU
AT SUPERIOR

FIGURE 20

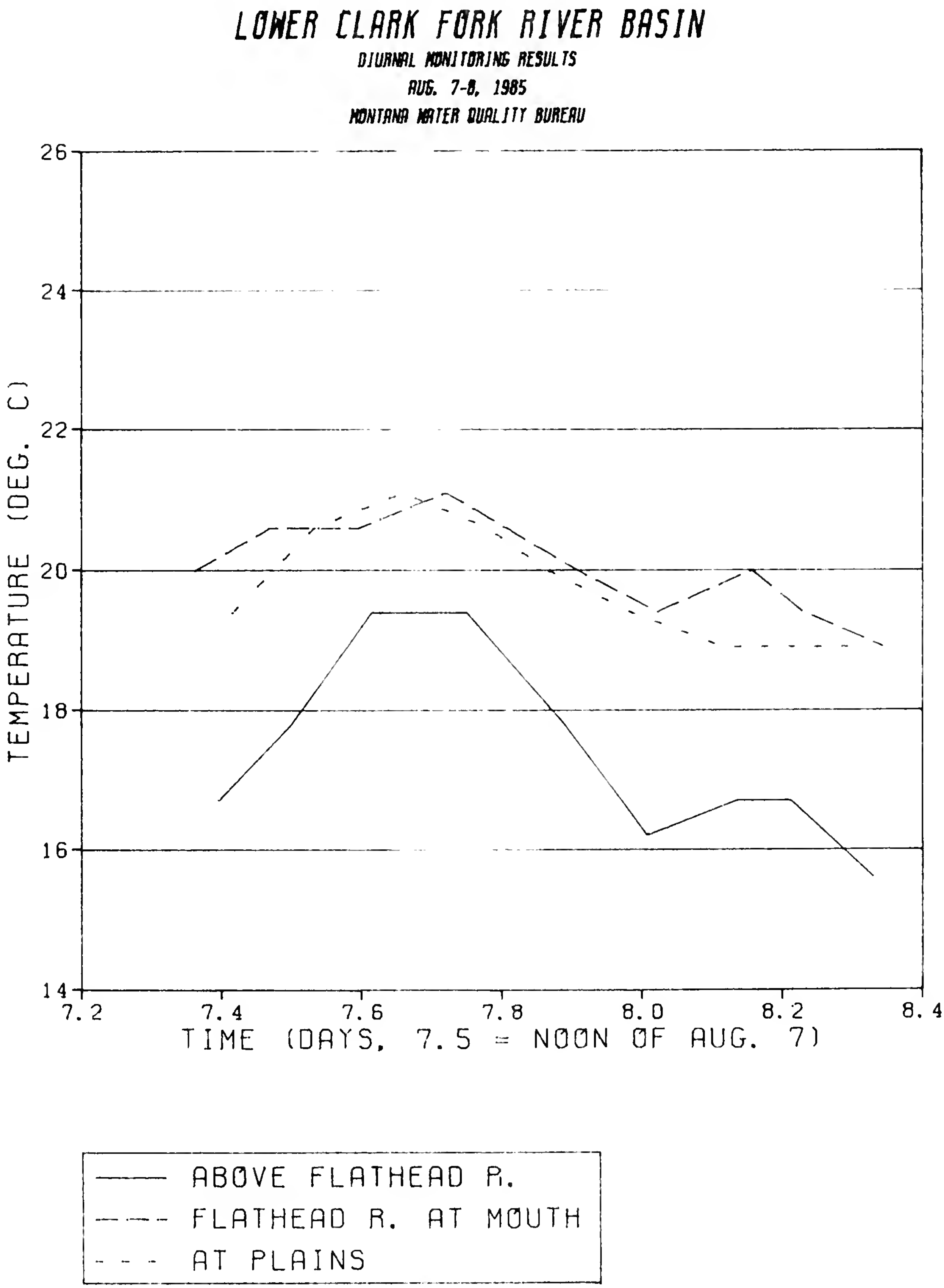
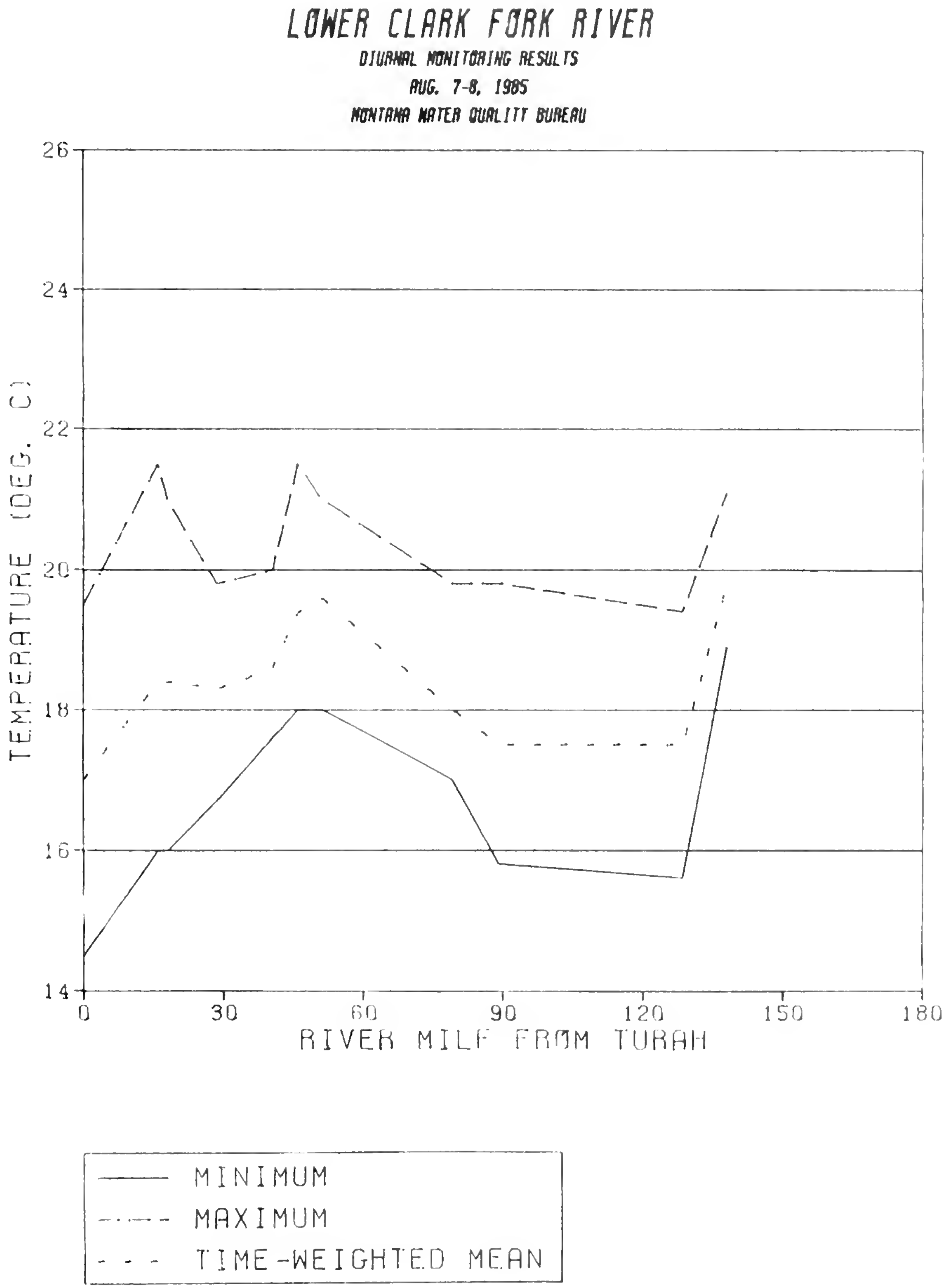

LOWER CLARK FORK RIVER BASIN
DIURNAL MONITORING RESULTS
AUG. 7-8, 1985
MONTANA WATER QUALITY BUREAU
26
24
22
20
18
16
14
TEMPERATURE (DEG. C)
7.2
7.4
7.6
7.8
8.0
8.2
8.4
TIME (DAYS, 7.5 = NOON OF AUG. 7)
ABOVE FLATHEAD R.
FLATHEAD R. AT MOUTH
AT PLAINS

FIGURE 21


LOWER CLARK FORK RIVER
DIURNAL MONITORING RESULTS
AUG. 7-8, 1985
MONTANA WATER QUALITY BUREAU
TEMPERATURE (DEG. C)
26
24
22
20
18
16
14
0
30
60
90
120
150
180
RIVER MILE FROM TURAH
MINIMUM
MAXIMUM
TIME-WEIGHTED MEAN

## B. Biological Water Quality Monitoring

### 1. Shallow-water Monitoring: River Stations

#### a. Rationale

Riffles are the most productive habitats in rivers for benthic algae and macroinvertebrates. The kinds and diversity of organisms living in these habitats tell a great deal about the nature and degree of stress placed upon a river by various water quality contaminants. Analysis of chlorophyll and biomass in grab samples of slime (microbial growth) from natural substrates on the river bottom will indicate the relative importance of producers (algae) and consumers (bacteria, fungi, etc.) in the benthic community and, in turn, the significance and cumulative effects of organic loading to the river. Measurements of algae production on artificial substrates (glass slides) will indicate the biostimulation effects of nutrients discharged by the Missoula Wastewater Treatment Plant and Champion International.

#### b. Methods

Biological sampling was conducted seasonally (spring, summer, fall) at each of 20 river stations. Samples routinely collected included traveling-kick macroinvertebrate samples and a composite sampling of the periphyton present at each station. A periphyton scraping from the natural substrates was collected for chlorophyll and biomass measurements at each station during the first three monitoring runs. Additionally, artificial substrates (periphytometers) were placed in the river at nine stations during the fall of 1983 and summer of 1984 for periphyton colonization and subsequent quantitative chlorophyll and biomass determinations.

Biological sample collection and analysis methods and the analyzing laboratory are summarized in Table 15. For some tests, references are made to the Appendix C. where lengthier methods are described.

#### c. Results

Species identifications and counts are given for each traveling-kick macroinvertebrate sample by season in Table 16. Shannon's species diversity (Margalef, 1958) and percent relative abundance data are given in Table 17. Note that for both Tables 16 and 17, the number at the beginning of each sample code denotes the sampling station number. Also note that the spring 1984 sampling consisted of one sample at each station. During successive seasonal samplings, four replicate samples were collected at each station (see description of macroinvertebrate sampling technique in Appendix C.). Czekanowski's similarity coefficients (Goodall, 1978) computed for pairs of stations are listed in the matrices in Table 18.

Periphyton analysis results and various community structure data are presented in Tables 19-21.

Chlorophyll and biomass data and various indices computed for both the natural and artificial substrate samples are tabulated in Tables 22 and 23.

Table 15. Sample Collection and Analysis Methods for Shallow-water Biological Monitoring

| Variable | Collection Method | Analytical Method | Laboratory |
|---|---|---|---|
| Benthic Macroinvertebrate Community Structure | Modified traveling kicknet method described in Appendix B. | Species identifications and counts made using numerous current taxonomic references. | C. Evan Hornig (contractor) |
| Periphyton Community Structure | Composite sampling technique described in Appendix B. | Species identifications and counts made using numerous current taxonomic references. | MDHES WQB |
| Periphyton Chlorophyll and Biomass ($mg/m^2$ and $mg/m^2$/day) | | | |
| Natural Substrates<br>Artificial Substrates | Sample collection and analysis techniques described in Appendix B. | | MDHES Chem Lab and WQB |

Table 16. Benthic Macroinvertebrate Sample Counts and Identifications Spring, 1984

Shallow Water Stations - Kick Samples

| 01TUR3 | |
|---|---|
| BAETIS TRICAUDAT | 206 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 344 |
| CINYGMULA SP. A | 2 |
| RHITHROGENA HAGE | 70 |
| PARALEPTOPHL MEM | 2 |
| AMELETUS SPARSAT | 1 |
| AMELETUS VELOX | 1 |
| CAPNIA-GROUP SP. | 23 |
| ALLOPERLA-GROUP | 34 |
| PROSTOIA BESAMET | 50 |
| ZAPADA CINCTIPES | 1 |
| CLAASSENI SABULO | 8 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 5 |
| ISOPERLA FULVA | 123 |
| ISOPERLA QUINQUE | 33 |
| PTERONARCELLA BA | 32 |
| PTERONARCYS CALI | 1 |
| TAENIONEMA PACIF | 20 |
| BRACHYCENTRUS AM | 1 |
| ARCTOPSYCHE GRAN | 3 |
| CHEUMATOPSYCHE | 2 |
| HYDROPSYCHE OCCI | 31 |
| SYMPHITOPSYCHE C | 5 |
| SYMPHITOPSYCHE S | 17 |
| LEPIDOSTOMA SP.A | 1 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 1 |
| ATHERIX VARIEGAT | 3 |
| MICROTENDIPES A | 1 |
| ORTHOCLADIUS (EU | 1 |
| ORTHOCLADIUS A | 2 |
| SIMULIUM SP. A | 27 |
| HEXATOMA SP. | 1 |
| TIPULA SP. | 1 |

| 02BLW3 | |
|---|---|
| BAETIS TRICAUDAT | 313 |
| DRUNELLA DODDSI | 1 |
| DRUNELLA GRANDIS | 6 |
| EPHEMERELLA INFR | 98 |
| RHITHROGENA HAGE | 128 |
| AMELETUS VELOX | 3 |
| ALLOPERLA-GROUP | 68 |
| PROSTOIA BESAMET | 8 |
| CALINEURIA CALIF | 27 |
| CLAASSENI SABULO | 14 |
| HESPEROPERLA PAC | 18 |
| CULTUS PILATUS | 9 |
| ISOGENOIDES ELON | 2 |
| ISOPERLA FULVA | 208 |
| PTERONARCYS CALI | 46 |
| TAENIONEMA PACIF | 18 |
| BRACHYCENTRUS OC | 1 |
| GLOSSOSOMA SP. | 17 |
| ARCTOPSYCHE GRAN | 17 |
| CHEUMATOPSYCHE | 164 |
| HYDROPSYCHE OCCI | 12 |
| SYMPHITOPSYCHE C | 108 |
| SYMPHITOPSYCHE S | 137 |
| PSYCHOMYIA FLAVI | 3 |
| RHYACOPHILA BIFI | 3 |
| PARARGYRACTIS SP | 1 |
| OPTIOSERVUS SPP. | 22 |
| ZAITZEVIA PARVUL | 49 |
| ATHERIX VARIEGAT | 7 |
| MICROTENDIPES A | 2 |
| DIAMESA SP. A | 1 |
| CRICOTOPUS SP. A | 1 |
| EUKIEFFERIELLA A | 8 |
| ORTHOCLADIUS (EU | 2 |
| ORTHOCLADIUS MAL | 3 |
| SIMULIUM SP. A | 170 |
| HEXATOMA SP. | 6 |

| 04CFM3 | |
|---|---|
| BAETIS TRICAUDAT | 385 |
| DRUNELLA GRANDIS | 12 |
| EPHEMERELLA INFR | 144 |
| RHITHROGENA HAGE | 13 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 100 |
| ALLOPERLA-GROUP | 15 |
| PROSTOIA BESAMET | 9 |
| CALINEURIA CALIF | 1 |
| CLAASSENI SABULO | 1 |
| HESPEROPERLA PAC | 6 |
| CULTUS PILATUS | 3 |
| ISOGENOIDES ELON | 20 |
| ISOPERLA FULVA | 154 |
| ISOPERLA QUINQUE | 15 |
| SKWALA PARALLELA | 5 |
| PTERONARCELLA BA | 21 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 106 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 55 |
| HYDROPSYCHE OCCI | 47 |
| SYMPHITOPSYCHE C | 55 |
| SYMPHITOPSYCHE S | 8 |
| LEPIDOSTOMA SP.A | 1 |
| OECETIS SP. | 1 |
| PSYCHOMYIA FLAVI | 5 |
| RHYACOPHILA BIFI | 2 |
| OREODYTES SCITIL | 1 |
| OPTIOSERVUS SPP. | 9 |
| ZAITZEVIA PARVUL | 8 |
| ATHERIX VARIEGAT | 4 |
| MICROTENDIPES A | 7 |
| DIAMESA SP. A | 3 |
| BRILLIA SP. | 2 |
| ORTHOCLADIUS (EU | 2 |
| ORTHOCLADIUS OBU | 2 |
| TRISSOCLADIUS A | 1 |
| SIMULIUM SP. A | 2 |
| HEXATOMA SP. | 5 |

| 05MIS3 | |
|---|---|
| BAETIS TRICAUDAT | 547 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 81 |
| RHITHROGENA HAGE | 125 |
| AMELETUS SPARSAT | 2 |
| AMELETUS VELOX | 3 |
| CAPNIA-GROUP SP. | 24 |
| ALLOPERLA-GROUP | 30 |
| PROSTOIA BESAMET | 2 |
| CALINEURIA CALIF | 1 |
| CLAASSENI SABULO | 1 |
| HESPEROPERLA PAC | 3 |
| CULTUS PILATUS | 6 |
| ISOGENOIDES ELON | 27 |
| ISOPERLA FULVA | 242 |
| ISOPERLA QUINQUE | 17 |
| SKWALA PARALLELA | 8 |
| PTERONARCELLA BA | 9 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 44 |
| ARCTOPSYCHE GRAN | 1 |
| CHEUMATOPSYCHE | 9 |
| HYDROPSYCHE OCCI | 21 |
| SYMPHITOPSYCHE C | 21 |
| SYMPHITOPSYCHE S | 9 |
| PSYCHOMYIA FLAVI | 1 |
| RHYACOPHILA BIFI | 1 |
| ZAITZEVIA PARVUL | 1 |
| ATHERIX VARIEGAT | 1 |
| ORTHOCLADIUS (EU | 1 |
| SIMULIUM SP. A | 1 |

| 06MIW3 | |
|---|---|
| BAETIS TRICAUDAT | 174 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 125 |
| CINYGMULA SP. A | 2 |
| RHITHROGENA HAGE | 15 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 20 |
| ALLOPERLA-GROUP | 4 |
| PROSTOIA BESAMET | 2 |
| CALINEURIA CALIF | 1 |
| CLAASSENI SABULO | 1 |
| HESPEROPERLA PAC | 2 |
| CULTUS PILATUS | 11 |
| ISOGENOIDES ELON | 10 |
| ISOPERLA FULVA | 58 |
| ISOPERLA QUINQUE | 30 |
| SKWALA PARALLELA | 5 |
| PTERONARCELLA BA | 8 |
| PTERONARCYS CALI | 8 |
| TAENIONEMA PACIF | 12 |
| ARCTOPSYCHE GRAN | 9 |
| CHEUMATOPSYCHE | 79 |
| HYDROPSYCHE OCCI | 37 |
| SYMPHITOPSYCHE C | 70 |
| SYMPHITOPSYCHE S | 3 |
| PSYCHOMYIA FLAVI | 8 |
| RHYACOPHILA BIFI | 1 |
| ZAITZEVIA PARVUL | 14 |
| DIAMESA SP. A | 3 |
| DIAMESA SP. B | 4 |
| CRICOTOPUS SP. A | 1 |
| CRICOTOPUS SP. B | 3 |
| ORTHOCLADIUS (EU | 12 |
| ORTHOCLADIUS A | 2 |
| ORTHOCLADIUS B | 1 |
| ORTHOCLADIUS C | 1 |
| ORTHOCLADIUS MAL | 1 |
| ORTHOCLADIUS OBU | 6 |
| HEXATOMA SP. | 3 |

| 08BMW3 | |
|---|---|
| BAETIS TRICAUDAT | 119 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 463 |
| RHITHROGENA HAGE | 10 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 14 |
| ALLOPERLA-GROUP | 1 |
| PROSTOIA BESAMET | 3 |
| ZAPADA COLUMBIAN | 1 |
| CALINEURIA CALIF | 2 |
| CLAASSENI SABULO | 8 |
| HESPEROPERLA PAC | 4 |
| CULTUS PILATUS | 68 |
| ISOGENOIDES ELON | 40 |
| ISOPERLA FULVA | 130 |
| ISOPERLA QUINQUE | 93 |
| PTERONARCELLA BA | 19 |
| PTERONARCYS CALI | 2 |
| TAENIONEMA PACIF | 18 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 84 |
| HYDROPSYCHE OCCI | 63 |
| SYMPHITOPSYCHE C | 50 |
| SYMPHITOPSYCHE S | 7 |
| HYDROPTILA SP. | 2 |
| PSYCHOMYIA FLAVI | 4 |
| PARARGYRACTIS SP | 8 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 11 |
| MICROTENDIPES A | 3 |
| PHAENOPSECTRA SP | 1 |
| DIAMESA SP. A | 1 |
| DIAMESA SP. B | 16 |
| PAGASTTIA SP. | 1 |
| CRICOTOPUS SP. B | 5 |
| EUKIEFFERIELLA A | 2 |
| ORTHOCLADIUS (EU | 4 |
| ORTHOCLADIUS B | 7 |
| ORTHOCLADIUS OBU | 12 |
| ABLABESMYIA SP. | 1 |
| WIEDEMANNIA SP. | 1 |
| SIMULIUM SP. A | 1 |
| HEXATOMA SP. | 2 |
| OLIGOCHAETA | 4 |

| 09SHE3 | |
|---|---|
| BAETIS TRICAUDAT | 77 |
| EPHEMERELLA INFR | 326 |
| RHITHROGENA HAGE | 7 |
| PARALEPTOPHL MEM | 1 |
| AMELETUS VELOX | 8 |
| CAPNIA-GROUP SP. | 43 |
| ALLOPERLA-GROUP | 1 |
| PROSTOIA BESAMET | 1 |
| CLAASSENI SABULO | 3 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 43 |
| ISOPERLA FULVA | 72 |
| ISOPERLA QUINQUE | 41 |
| SKWALA PARALLELA | 9 |
| PTERONARCELLA BA | 3 |
| TAENIONEMA PACIF | 9 |
| ARCTOPSYCHE GRAN | 1 |
| CHEUMATOPSYCHE | 66 |
| HYDROPSYCHE OCCI | 34 |
| SYMPHITOPSYCHE C | 20 |
| SYMPHITOPSYCHE S | 6 |
| OECETIS SP. A | 1 |
| PSYCHOMYIA FLAVI | 6 |
| PARARGYRACTIS SP | 5 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 4 |
| ATHERIX VARIEGAT | 2 |
| MICROTENDIPES A | 2 |
| PARACLADOPELMA | 1 |
| DIAMESA SP. A | 1 |
| DIAMESA SP. B | 8 |
| CRICOTOPUS SP. B | 1 |
| CRICOTOPUS SP. C | 1 |
| EUKIEFFERIELLA A | 1 |
| EUKIEFFERIELLA B | 2 |
| EUKIEFFERIELLA C | 1 |
| ORTHOCLADIUS (EU | 13 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS OBU | 25 |
| WIEDEMANNIA SP. | 1 |
| HEXATOMA SP. | 2 |

| 10BRM3 | |
|---|---|
| BAETIS TRICAUDAT | 98 |
| DRUNELLA GRANDIS | 15 |
| EPHEMERELLA INFR | 316 |
| RHITHROGENA HAGE | 72 |
| PARALEPTOPHL MEM | 3 |
| CAPNIA-GROUP SP. | 50 |
| ALLOPERLA-GROUP | 1 |
| CLAASSENI SABULO | 18 |
| CULTUS PILATUS | 6 |
| ISOGENOIDES ELON | 5 |
| ISOPERLA FULVA | 35 |
| ISOPERLA QUINQUE | 21 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 23 |
| TAENIONEMA PACIF | 53 |
| GLOSSOSOMA SP. | 1 |
| ARCTOPSYCHE GRAN | 5 |
| CHEUMATOPSYCHE | 206 |
| HYDROPSYCHE OCCI | 298 |
| SYMPHITOPSYCHE C | 31 |
| SYMPHITOPSYCHE S | 6 |
| HYDROPTILA SP. | 8 |
| LEPIDOSTOMA SP.A | 4 |
| PARARGYRACTIS SP | 2 |
| OREODYTES SCITIL | 1 |
| OPTIOSERVUS SPP. | 104 |
| ZAITZEVIA PARVUL | 32 |
| ATHERIX VARIEGAT | 6 |
| MICROPSECTRA SP. | 5 |
| DIAMESA SP. B | 3 |
| PAGASTIA SP. | 5 |
| CRICOTOPUS SP. A | 12 |
| CRICOTOPUS SP. B | 14 |
| EUKIEFFERIELLA C | 5 |
| ORTHOCLADIUS (EU | 8 |
| ORTHOCLADIUS OBU | 5 |
| SIMULIUM SP. A | 67 |
| HEXATOMA SP. | 3 |
| TIPULA SP. | 5 |
| OLIGOCHAETA LUMB | 15 |
| TURBELLARIA | 3 |

| 11HAR3 | |
|---|---|
| BAETIS TRICAUDAT | 250 |
| EPHEMERELLA INFR | 565 |
| RHITHROGENA HAGE | 120 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 1 |
| CLAASSENI SABULO | 9 |
| CULTUS PILATUS | 57 |
| ISOGENOIDES ELON | 46 |
| ISOPERLA FULVA | 168 |
| ISOPERLA QUINQUE | 85 |
| SKWALA PARALLELA | 1 |
| PTERONARCELLA BA | 25 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 46 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 59 |
| HYDROPSYCHE OCCI | 112 |
| SYMPHITOPSYCHE C | 2 |
| SYMPHITOPSYCHE S | 1 |
| HYDROPTILA SP. | 66 |
| LEPIDOSTOMA SP.A | 2 |
| OECETIS SP. A | 2 |
| PARARGYRACTIS SP | 1 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 4 |
| ATHERIX VARIEGAT | 6 |
| MICROPSECTRA SP. | 1 |
| MICROTENDIPES A | 1 |
| DIAMESA SP. A | 1 |
| DIAMESA SP. B | 12 |
| PAGASTIA SP. | 3 |
| CRICOTOPUS SP. A | 10 |
| CRICOTOPUS SP. B | 13 |
| EUKIEFFERIELLA B | 1 |
| EUKIE ERIELLA C | 2 |
| ORTHOCLADIUS (EU | 60 |
| ORTHOCLADIUS A | 1 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS MAL | 1 |
| ORTHOCLADIUS OBU | 47 |
| TRISSOCLADIUS A | 1 |
| CHELIFERA SP. | 1 |
| PROSIMULIUM SP. | 1 |
| SIMULIUM SP. A | 187 |
| HEXATOMA SP. | 21 |

| 13BCH3 | |
|---|---|
| BAETIS TRICAUDAT | 107 |
| EPHEMERELLA INFR | 288 |
| RHITHROGENA HAGE | 212 |
| PARALEPTOPHL MEM | 2 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 19 |
| ALLOPERLA-GROUP | 7 |
| CALINEURIA CALIF | 1 |
| CLAASSENI SABULO | 31 |
| HESPEROPERLA PAC | 6 |
| CULTUS PILATUS | 25 |
| ISOGENOIDES ELON | 37 |
| ISOPERLA FULVA | 157 |
| ISOPERLA QUINQUE | 36 |
| SKWALA PARALLELA | 7 |
| PTERONARCELLA BA | 31 |
| PTERONARCYS CALI | 1 |
| TAENIONEMA PACIF | 50 |
| BRACHYCENTRUS OC | 1 |
| ARCTOPSYCHE GRAN | 7 |
| CHEUMATOPSYCHE | 37 |
| HYDROPSYCHE OCCI | 57 |
| SYMPHITOPSYCHE C | 5 |
| HYDROPTILA SP. | 16 |
| LEPIDOSTOMA SP.A | 1 |
| OECETIS SP. A | 6 |
| PSYCHOMYIA FLAVI | 2 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 9 |
| ATHERIX VARIEGAT | 12 |
| CHIRONOMUS SP. | 1 |
| MICROTENDIPES A | 10 |
| DIAMESA SP. B | 2 |
| PAGASTIA SP. | 4 |
| POTTHASTIA SP. | 1 |
| CRICOTOPUS SP. A | 2 |
| ORTHOCLADIUS (EU | 5 |
| ORTHOCLADIUS D | 1 |
| ORTHOCLADIUS OBU | 8 |
| TRISSOCLADIUS A | 1 |
| SIMULIUM SP. A | 69 |
| HEXATOMA SP. | 41 |
| TIPULA SP. | 2 |

Table 16. Continued

| 15HUS3 | |
|---|---|
| BAETIS TRICAUDAT | 153 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 616 |
| RHITHROGENA HAGE | 296 |
| PARALEPTOPHL MEM | 1 |
| AMELETUS SPARSAT | 15 |
| CAPNIA-GROUP SP. | 15 |
| CALINEURIA CALIF | 2 |
| CLAASSENI SABULO | 6 |
| HESPEROPERLA PAC | 6 |
| CULTUS PILATUS | 15 |
| ISOGENOIDES ELON | 46 |
| ISOPERLA FULVA | 112 |
| ISOPERLA QUINQUE | 37 |
| SKWALA PARALLELA | 12 |
| PTERONARCELLA BA | 22 |
| PTERONARCYS CALI | 5 |
| TAENIONEMA PACIF | 23 |
| BRACHYCENTRUS OC | 1 |
| ARCTOPSYCHE GRAN | 1 |
| CHEUMATOPSYCHE | 11 |
| HYDROPSYCHE OCCI | 23 |
| SYMPHITOPSYCHE C | 3 |
| HYDROPTILA SP. | 58 |
| OECETIS SP. A | 2 |
| PSYCHOMYIA FLAVI | 2 |
| PARARGYRACTIS SP | 1 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 6 |
| ZAITZEVIA PARVUL | 7 |
| ATHERIX VARIEGAT | 5 |
| MICROTENDIPES A | 48 |
| DIAMESA SP. A | 1 |
| DIAMESA SP. B | 1 |
| EUKIEFFERIELLA C | 1 |
| ORTHOCLADIUS (EU | 13 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS D | 1 |
| ORTHOCLADIUS OBU | 5 |
| TRISSOCLADIUS A | 2 |
| ABLABESMYIA SP. | 1 |
| DIPTERA-DOLICHOP | 1 |
| SIMULIUM SP. A | 14 |
| HEXATOMA SP. | 22 |
| TIPULA SP. | 1 |

| 19LOZ3 | |
|---|---|
| BAETIS TRICAUDAT | 265 |
| DRUNELLA GRANDIS | 8 |
| EPHEMERELLA INFR | 953 |
| HEPTAGENIA SOLIT | 5 |
| RHITHROGENA HAGE | 37 |
| PARALEPTOPHL MEM | 60 |
| CAPNIA-GROUP SP. | 9 |
| PROSTOIA BESAMET | 5 |
| CLAASSENI SABULO | 1 |
| HESPEROPERLA PAC | 1 |
| CULTUS PILATUS | 78 |
| ISOGENOIDES ELON | 38 |
| ISOPERLA FULVA | 71 |
| ISOPERLA QUINQUE | 53 |
| SKWALA PARALLELA | 2 |
| PTERONARCYS CALI | 1 |
| TAENIONEMA PACIF | 23 |
| BRACHYCENTRUS OC | 1 |
| CHEUMATOPSYCHE | 40 |
| HYDROPSYCHE OCCI | 39 |
| SYMPHITOPSYCHE C | 10 |
| HYDROPTILA SP. | 6 |
| PSYCHOMYIA FLAVI | 2 |
| OPTIOSERVUS SPP. | 2 |
| MICROPSECTRA SP. | 2 |
| MICROTENDIPES A | 1 |
| DIAMESA SP. A | 6 |
| DIAMESA SP. B | 2 |
| PAGASTIA SP. | 34 |
| CRICOTOPUS SP. A | 4 |
| CRICOTOPUS SP. B | 2 |
| EUKIEFFERIELLA A | 1 |
| ORTHOCLADIUS (EU | 60 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS D | 3 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS OBU | 15 |
| TRISSOCLADIUS A | 2 |

Table 16. Continued

| 21STR3 | |
|---|---|
| BAETIS TRICAUDAT | 605 |
| DRUNELLA GRANDIS | 3 |
| EPHEMERELLA INFR | 1492 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 314 |
| PARALEPTOPHL MEM | 115 |
| AMELETUS VELOX | 6 |
| CAPNIA-GROUP SP. | 4 |
| PROSTOIA BESAMET | 6 |
| CULTUS PILATUS | 13 |
| ISOGENOIDES ELON | 18 |
| ISOPERLA FULVA | 38 |
| ISOPERLA QUINQUE | 61 |
| TAENIONEMA PACIF | 61 |
| CHEUMATOPSYCHE | 10 |
| HYDROPSYCHE OCCI | 10 |
| SYMPHITOPSYCHE C | 2 |
| SYMPHITOPSYCHE S | 1 |
| HYDROPTILA SP. | 3 |
| LEPIDOSTOMA SP.A | 1 |
| PSYCHOMYIA FLAVI | 1 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 3 |
| MICROPSECTRA SP. | 1 |
| MICROTENDIPES A | 5 |
| DIAMESA SP. A | 3 |
| DIAMESA SP. B | 24 |
| PAGASTIA SP. | 19 |
| CRICOTOPUS SP. B | 5 |
| ORTHOCLADIUS (EU | 149 |
| ORTHOCLADIUS B | 15 |
| ORTHOCLADIUS D | 7 |
| ORTHOCLADIUS MAL | 6 |
| ORTHOCLADIUS OBU | 57 |
| TRISSOCLADIUS A | 24 |
| SIMULIUM SP. A | 2 |

| 24APL3 | |
|---|---|
| BAETIS TRICAUDAT | 23 |
| EPHEMERELLA INFR | 8 |
| HEPTAGENIA SOLIT | 6 |
| RHITHROGENA HAGE | 6 |
| STENONEMA SP. | 1 |
| PARALEPTOPHL MEM | 74 |
| ISOGENOIDES ELON | 2 |
| TAENIONEMA PACIF | 10 |
| CHEUMATOPSYCHE | 1 |
| ZAITZEVIA PARVUL | 1 |
| DICROTENDIPES SP | 1 |
| MICROPSECTRA SP. | 2 |
| DIAMESA SP. A | 1 |
| DIAMESA SP. B | 53 |
| PAGASTIA SP. | 7 |
| CRICOTOPUS SP. B | 58 |
| EUKIEFFERIELLA D | 2 |
| ORTHOCLADIUS (EU | 220 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS D | 5 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS OBU | 269 |
| TRISSOCLADIUS A | 81 |
| SIMULIUM SP. A | 9 |

Table 16. Continued

| | |
|---|---|
| 27TFR3 | |
| BAETIS TRICAUDAT | 1 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 2 |
| CINYGMULA SP. A | 1 |
| HEPTAGENIA SOLIT | 11 |
| STENONEMA SP. | 132 |
| PTERONARCYS CALI | 1 |
| TAENIONEMA PACIF | 3 |
| OPHIOGOMPHUS SP. | 2 |
| GLOSSOSOMA SP. | 1 |
| CHEUMATOPSYCHE | 76 |
| HYDROPSYCHE SP.A | 14 |
| HYDROPSYCHE OCCI | 10 |
| SYMPHITOPSYCHE C | 44 |
| HYDROPTILA SP. | 25 |
| ZUMATRICHIA NOTO | 1 |
| CERACLEA SP. | 34 |
| OECETIS SP. A | 1 |
| PSYCHOMYIA FLAVI | 20 |
| PARARGYRACTIS SP | 7 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 13 |
| MICROPSECTRA SP. | 1 |
| MICROTENDIPES A | 17 |
| DIAMESA SP. B | 5 |
| PAGASTIA SP. | 68 |
| CRICOTOPUS SP. A | 5 |
| CRICOTOPUS SP. B | 1 |
| EUKIEFFERIELLA A | 1 |
| EUKIEFFERIELLA C | 6 |
| ORTHOCLADIUS (EU | 9 |
| ORTHOCLADIUS B | 10 |
| ORTHOCLADIUS MAL | 3 |
| ORTHOCLADIUS OBU | 56 |
| TRISSOCLADIUS A | 10 |
| SIMULIUM SP. A | 1 |
| FERRISSIA SP. | 1 |

Table 16. Continued

| 09C-10Q | |
|---|---|
| BAETIS INSIGNIFI | 20 |
| BAETIS TRICAUDAT | 16 |
| EPHEMERELLA INFR | 844 |
| HEPTAGENIA SOLIT | 16 |
| RHITHROGENA HAGE | 180 |
| PARALEPTOPHL MEM | 24 |
| AMELETUS VELOX | 4 |
| CLAASSENIA SABULO | 8 |
| HESPEROPERLA PAC | 12 |
| ISOGENOIDES ELON | 12 |
| ISOPERLA FULVA | 60 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 8 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 464 |
| HYDROPSYCHE OCCI | 380 |
| SYMPHITOPS COCKE | 48 |
| HYDROPTILA SP. | 108 |
| OECETIS SP. A | 12 |
| PSYCHOMYIA FLAVI | 16 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 32 |
| MICROTENDIPES SP | 60 |
| PHAENOPSECTRA SP | 16 |
| TANYTARSUS SP. B | 8 |
| CRICOTOPUS SP. 3 | 12 |
| EUKIEFFERIELLA B | 28 |
| ORTHOCLADIUS 3 | 4 |
| ORTHOCLADIUS OBU | 32 |
| CHELIFERA SP. | 4 |

| 09D-10Q | |
|---|---|
| BAETIS INSIGNIFI | 12 |
| BAETIS TRICAUDAT | 8 |
| EPHEMERELLA INFR | 544 |
| HEPTAGENIA SOLIT | 8 |
| RHITHROGENA HAGE | 48 |
| PARALEPTOPHL MEM | 8 |
| AMELETUS VELOX | 12 |
| CAPNIA-GROUP SP. | 16 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 4 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 104 |
| HYDROPSYCHE OCCI | 72 |
| SYMPHITOPS COCKE | 36 |
| HYDROPTILA SP. | 144 |
| OECETIS SP. A | 8 |
| PSYCHOMYIA FLAVI | 72 |
| MICROTENDIPES SP | 28 |
| PHAENOPSECTRA SP | 48 |
| TANYTARSUS SP. B | 84 |
| CRICOTOPUS SP. B | 12 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 140 |
| SYNORTHOCLADIUS | 8 |
| OLIGOCHAETA | 4 |

Table 16. Continued

| 10A-100 | |
|---|---|
| BAETIS INSIGNIFI | 8 |
| BAETIS TRICAUDAT | 44 |
| CENTROPTILU SP.A | 4 |
| EPHEMERELLA INFR | 184 |
| HEPTAGENIA SOLIT | 24 |
| RHITHROGENA HAGE | 44 |
| PARALEPTOPHL MEM | 32 |
| AMELETUS VELOX | 12 |
| CLAASSENI SABULO | 12 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 16 |
| PTERONARCELLA BA | 4 |
| TAENIONEMA PACIF | 4 |
| BRACHYCENTRUS OC | 16 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 148 |
| HYDROPSYCHE OCCI | 248 |
| SYMPHITOPS COCKE | 44 |
| SYMPHITOPS SLOSS | 4 |
| HYDROPTILA SP. | 108 |
| PSYCHOMYIA FLAVI | 4 |
| PARARGYRACTIS SP | 8 |
| OPTIOSERVUS SPP. | 152 |
| ZAITZEVIA PARVUL | 36 |
| ATHERIX VARIEGAT | 4 |
| MICROPSECTR SP.A | 16 |
| TANYTARSUS SP. B | 4 |
| CRICOTOPUS SP. B | 32 |
| EUKIEFFERIELLA B | 104 |
| EUKIEFFERIELLA H | 12 |
| SIMULIUM SP. | 84 |
| ANTOCHA SP. | 4 |
| HIRUDINEA | 4 |

| 10B-100 | |
|---|---|
| BAETIS INSIGNIFI | 20 |
| BAETIS TRICAUDAT | 48 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 468 |
| CINYGMULA SP. | 4 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 132 |
| PARALEPTOPHL MEM | 16 |
| AMELETUS VELOX | 8 |
| CLAASSENI SABULO | 36 |
| HESPEROPERLA PAC | 4 |
| CULTUS PILATUS | 4 |
| ISOPERLA FULVA | 56 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 12 |
| TAENIONEMA PACIF | 4 |
| BRACHYCENTRUS OC | 12 |
| ARCTOPSYCHE GRAN | 48 |
| CHEUMATOPSYCHE | 300 |
| HYDROPSYCHE OCCI | 460 |
| SYMPHITOPS COCKE | 156 |
| SYMPHITOPS SLOSS | 8 |
| HYDROPTILA SP. | 360 |
| LEUCOTRICHIA PIC | 4 |
| OECETIS SP. A | 8 |
| PSYCHOMYIA FLAVI | 8 |
| PARARGYRACTIS SP | 8 |
| OPTIOSERVUS SPP. | 280 |
| ZAITZEVIA PARVUL | 84 |
| MICROPSECTR SP.A | 24 |
| MICROTENDIPES SP | 4 |
| POLYPEDILUM SP.A | 4 |
| TANYTARSUS SP. B | 4 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA B | 32 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 8 |
| THIENEMANIELL SP | 4 |
| CHELIFERA SP. | 8 |
| WIEDEMANNIA SP. | 8 |
| SIMULIUM SP. | 20 |
| ANTOCHA SP | 32 |
| OLIGOCHAETA LUMB | 16 |

Table 16. Deep Water Monitoring Stations - Petite Ponar Grab Samples

| P03MT3 | |
|---|---|
| CHIRONOMUS SP. | 1 |
| ORMOSIA SP. | 1 |
| OLIGOCHAETA | 9 |

| P16BN3 | |
|---|---|
| CHIRONOMUS SP. | 3 |
| CRYPTOCHIRONOMUS | 2 |
| PHAENOPSECTRA SP | 1 |
| MONODIAMESA SP. | 1 |
| HETEROTRISSOCLAD | 1 |
| ORTHOCLADIUS OBU | 5 |
| TRISSOCLADIUS A | 1 |
| HEXATOMA SP. | 1 |
| OLIGOCHAETA | 126 |

| P26TF3 | |
|---|---|
| ISCHNURA SP. | 1 |
| PARARGYRACTIS SP | 1 |
| ZAITZEVIA PARVUL | 1 |
| CHIRONOMUS SP. | 45 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTRA SP. | 2 |
| PHAENOPSECTRA SP | 10 |
| PSEUDOCHIRONOMUS | 2 |
| MONODIAMESA SP. | 1 |
| CRICOTOPUS SP. B | 1 |
| EUKIEFFERIELLA B | 1 |
| ORTHOCLADIUS (EU | 1 |
| TRISSOCLADIUS A | 6 |
| PROCLADIUS SP. | 4 |
| OLIGOCHAETA | 134 |

| P28NR3 | |
|---|---|
| LEPTOPHLEBIA GRA | 1 |
| PALPOMYIA-GP SP. | 2 |
| DICROTENDIPES SP | 1 |
| MICROPSECTRA SP. | 2 |
| ORTHOCLADIUS OBU | 1 |
| PROCLADIUS SP. | 31 |
| OLIGOCHAETA | 48 |

| P30CG3 | |
|---|---|
| OECETIS SP. B | 1 |
| PALPOMYIA-GP SP. | 1 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTRA SP. | 2 |
| POLYPEDILUM SP.B | 1 |
| PSEUDOCHIRONOMUS | 19 |
| HETEROTRISSOCLAD | 1 |
| ORTHOCLADIUS E | 18 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 1 |
| PROCLADIUS SP. | 9 |
| OLIGOCHAETA | 1 |

Table 16. Benthic Macroinvertebrate Sample Counts and Identifications Summer, 1984.
Shallow Water Stations - Kick Samples

| 01A-8H* | |
|---|---|
| BAETIS INSIGNIFI | 134 |
| BAETIS TRICAUDAT | 252 |
| ATTENELLA MARGAR | 104 |
| DRUNELLA FLAVILI | 4 |
| DRUNELLA GRANDIS | 10 |
| SERRATELLA TIBIA | 44 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 26 |
| RHITHROGENA HAGE | 14 |
| TRICORYTHODES MI | 108 |
| ALLOPERLA-GROUP | 6 |
| ZAPADA CINCTIPES | 2 |
| CLAASSENI SABULO | 12 |
| ISOPERLA QUINQUE | 2 |
| SKWALA PARALLELA | 26 |
| PTERONARCELLA BA | 90 |
| ARCTOPSYCHE GRAN | 64 |
| CHEUMATOPSYCHE | 8 |
| HYDROPSYCHE OCCI | 82 |
| SYMPHITOPS COCKE | 30 |
| HYDROPTILA SP. | 42 |
| NEOTRICHIA SP. | 8 |
| OPTIOSERVUS SPP. | 40 |
| ZAITZEVIA PARVUL | 28 |
| ATHERIX VARIEGAT | 16 |
| MICROPSECTR SP.A | 2 |
| MICROPSECTR SP.C | 4 |
| PARACLADOPE SP.B | 2 |
| POLYPEDILUM SP.A | 50 |
| PAGASTIA SP. | 2 |
| CARDIOCLADI SP.C | 2 |
| CRICOTOPUS SP. B | 6 |
| EUKIEFFERIELLA B | 86 |
| EUKIEFFERIELLA E | 36 |
| HETEROTRISSOCLAD | 24 |
| ORTHOCLADIUS F | 2 |
| ORTHOCLADIUS NIG | 28 |
| ORTHOCLADIUS OBU | 2 |
| ABLABESMYIA SP. | 2 |
| SIMULIUM SP. | 44 |
| HEXATOMA SP. | 4 |

| 01B-8H | |
|---|---|
| BAETIS INSIGNIFI | 124 |
| BAETIS TRICAUDAT | 218 |
| CENTROPTILU SP.A | 4 |
| ATTENELLA MARGAR | 88 |
| SERRATELLA TIBIA | 48 |
| NIXE SIMPLICIOID | 40 |
| RHITHROGENA HAGE | 14 |
| TRICORYTHODES MI | 104 |
| ALLOPERLA-GROUP | 14 |
| CLAASSENI SABULO | 12 |
| ISOGENOIDES ELON | 28 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 46 |
| ARCTOPSYCHE GRAN | 50 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 26 |
| SYMPHITOPS COCKE | 24 |
| HYDROPTILA SP. | 52 |
| NEOTRICHIA SP. | 6 |
| OPTIOSERVUS SPP. | 14 |
| ZAITZEVIA PARVUL | 16 |
| ATHERIX VARIEGAT | 4 |
| MICROPSECTR SP.A | 6 |
| MICROPSECTR SP.C | 2 |
| MICROTENDIPES SP | 2 |
| POLYPEDILUM SP.A | 56 |
| PAGASTIA SP. | 2 |
| CARDIOCLADI SP.C | 2 |
| EUKIEFFERIELLA B | 90 |
| EUKIEFFERIELLA E | 24 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS NIG | 102 |
| ORTHOCLADIUS OBU | 2 |
| ABLABESMYIA SP. | 2 |
| SIMULIUM SP. | 34 |
| HEXATOMA SP. | 4 |

*H= half-sorted samples, counts here have been corrected (X2)
Q= quarter-sorted samples, counts here have been corrected (X4)

| 01C-8H | |
|---|---|
| BAETIS INSIGNIFI | 104 |
| BAETIS TRICAUDAT | 196 |
| ATTENELLA MARGAR | 100 |
| DRUNELLA FLAVILI | 2 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 48 |
| TIMPANOGA HECUBA | 2 |
| EPEORUS ALBERTAE | 4 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 34 |
| RHITHROGENA HAGE | 24 |
| TRICORYTHODES MI | 92 |
| ALLOPERLA-GROUP | 4 |
| MALENKA SP. | 2 |
| CLAASSENI SABULO | 8 |
| ISOGENOIDES ELON | 56 |
| SKWALA PARALLELA | 6 |
| PTERONARCELLA BA | 108 |
| PTERONARCYS CALI | 2 |
| ARCTOPSYCHE GRAN | 84 |
| CHEUMATOPSYCHE | 16 |
| HYDROPSYCHE OCCI | 80 |
| SYMPHITOPS COCKE | 40 |
| HYDROPTILA SP. | 48 |
| NEOTRICHIA SP. | 6 |
| OPTIOSERVUS SPP. | 30 |
| ZAITZEVIA PARVUL | 18 |
| ATHERIX VARIEGAT | 8 |
| MICROPSECTR SP.A | 6 |
| MICROPSECTR SP.C | 8 |
| POLYPEDILUM SP.A | 66 |
| POLYPEDILUM SP.C | 2 |
| CARDIOCLADI SP.C | 6 |
| CRICOTOPUS SP. B | 6 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 24 |
| EUKIEFFERIELLA E | 44 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS NIG | 20 |
| ABLABESMYIA SP. | 2 |
| SIMULIUM SP. | 14 |
| HEXATOMA SP. | 12 |

| 01D-8H | |
|---|---|
| BAETIS INSIGNIFI | 132 |
| BAETIS TRICAUDAT | 82 |
| ATTENELLA MARGAR | 64 |
| DRUNELLA GRANDIS | 8 |
| SERRATELLA TIBIA | 34 |
| EPEORUS ALBERTAE | 4 |
| NIXE CRIDDLEI | 4 |
| NIXE SIMPLICIOID | 26 |
| RHITHROGENA HAGE | 10 |
| TRICORYTHODES MI | 24 |
| ALLOPERLA-GROUP | 2 |
| CLAASSENI SABULO | 6 |
| HESPEROPERLA PAC | 2 |
| ISOGENOIDES ELON | 18 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 32 |
| PTERONARCYS CALI | 4 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 66 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 30 |
| SYMPHITOPS COCKE | 24 |
| HYDROPTILA SP. | 38 |
| NEOTRICHIA SP. | 6 |
| OPTIOSERVUS SPP. | 16 |
| ZAITZEVIA PARVUL | 12 |
| ATHERIX VARIEGAT | 8 |
| MICROPSECTR SP.A | 2 |
| MICROPSECTR SP.C | 2 |
| POLYPEDILUM SP.A | 10 |
| POLYPEDILUM SP.C | 2 |
| CRICOTOPUS SP. B | 2 |
| EUKIEFFERIELLA B | 52 |
| EUKIEFFERIELLA E | 22 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS NIG | 46 |
| ABLABESMYIA SP. | 2 |
| SIMULIUM SP. | 20 |

| | |
|---|---|
| 02A-8 | |
| BAETIS BICAUDATU | 1 |
| BAETIS FLAVISTRI | 5 |
| BAETIS HAGENI | 11 |
| BAETIS INSIGNIFI | 147 |
| BAETIS TRICAUDAT | 95 |
| DRUNELLA DODDSI | 3 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 1 |
| SERRATELLA TIBIA | 115 |
| EPEORUS ALBERTAE | 19 |
| NIXE CRIDDLEI | 4 |
| RHITHROGENA HAGE | 5 |
| PARALEPTOPHL DEB | 1 |
| ALLOPERLA-GROUP | 6 |
| CALINEURIA CALIF | 11 |
| CLAASSENI SABULO | 13 |
| HESPEROPERLA PAC | 1 |
| SKWALA PARALLELA | 2 |
| PTERONARCYS CALI | 5 |
| GLOSSOSOMA SP. | 1 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 5 |
| HYDROPSYCHE OCCI | 3 |
| SYMPHITOPS COCKE | 25 |
| LEUCOTRICHIA PIC | 1 |
| NEOTRICHIA SP. | 6 |
| DICOSMOECUS SP. | 3 |
| WORMALDIA SP. | 1 |
| PSYCHOMYIA FLAVI | 3 |
| OPTIOSERVUS SPP. | 36 |
| ZAITZEVIA PARVUL | 43 |
| ATHERIX VARIEGAT | 1 |
| CLADOTANYSARSU B | 1 |
| MICROTENDIPES SP | 27 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.A | 10 |
| TANYTARSUS SP. B | 55 |
| PSECTROCLADIUS C | 1 |
| SIMULIUM SP. | 1 |
| ANTOCHA SP. | 2 |
| HEXATOMA SP. | 12 |

| | |
|---|---|
| 02B-8 | |
| BAETIS FLAVISTRI | 13 |
| BAETIS HAGENI | 21 |
| BAETIS INSIGNIFI | 92 |
| BAETIS TRICAUDAT | 68 |
| ATTENELLA MARGAR | 5 |
| DRUNELLA DODDSI | 3 |
| DRUNELLA GRANDIS | 2 |
| SERRATELLA TIBIA | 65 |
| TIMPANOGA HECUBA | 1 |
| EPEORUS ALBERTAE | 20 |
| RHITHROGENA HAGE | 13 |
| ALLOPERLA-GROUP | 4 |
| AMPHINEMURA SP. | 1 |
| CALINEURIA CALIF | 14 |
| CLAASSENI SABULO | 12 |
| HESPEROPERLA PAC | 7 |
| PTERONARCYS CALI | 3 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 21 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 16 |
| NEOTRICHIA SP. | 8 |
| DICOSMOECUS SP. | 3 |
| WORMALDIA SP. | 4 |
| PSYCHOMYIA FLAVI | 2 |
| NARPUS CONCOLOR | 1 |
| OPTIOSERVUS SPP. | 55 |
| ZAITZEVIA PARVUL | 45 |
| CLADOTANYSARSU B | 2 |
| MICROTENDIPES SP | 29 |
| POLYPEDILUM SP.A | 22 |
| TANYTARSUS SP. B | 84 |
| MONODIAMESA SP. | 1 |
| PAGASTIA SP. | 1 |
| CORYNONEURA SP. | 2 |
| EUKIEFFERIELLA A | 1 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 2 |
| THIENEMANIELL SP | 2 |
| ABLABESMYIA SP. | 1 |
| CHELIFERA SP. | 3 |
| ANTOCHA SP. | 1 |
| HEXATOMA SP. | 11 |
| PHYSA SP. | 3 |
| OLIGOCHAETA LUMB | 2 |

Table 16. Continued

| 02C-8 | |
|---|---|
| BAETIS FLAVISTRI | 18 |
| BAETIS HAGENI | 19 |
| BAETIS INSIGNIFI | 66 |
| BAETIS TRICAUDAT | 63 |
| ATTENELLA MARGAR | 4 |
| DRUNELLA DODDSI | 2 |
| DRUNELLA FLAVILI | 2 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 122 |
| TIMPANOGA HECUBA | 1 |
| EPEORUS ALBERTAE | 31 |
| NIXE CRIDDLEI | 1 |
| RHITHROGENA HAGE | 9 |
| ALLOPERLA-GROUP | 7 |
| CALINEURIA CALIF | 7 |
| CLAASSENI SABULO | 15 |
| HESPEROPERLA PAC | 1 |
| PTERONARCYS CALI | 27 |
| GLOSSOSOMA SP. | 8 |
| ARCTOPSYCHE GRAN | 11 |
| CHEUMATOPSYCHE | 31 |
| HYDROPSYCHE OCCI | 2 |
| SYMPHITOPS COCKE | 27 |
| NEOTRICHIA SP. | 9 |
| DICOSMOECUS SP. | 3 |
| WORMALDIA SP. | 7 |
| OPTIOSERVUS SPP. | 34 |
| ZAITZEVIA PARVUL | 68 |
| ANACAENA SP. | 1 |
| CLADOTANYSARSU B | 2 |
| MICROTENDIPES SP | 22 |
| POLYPEDILUM SP.A | 10 |
| TANYTARSUS SP. B | 92 |
| CORYNONEURA SP. | 1 |
| EUKIEFFERIELLA E | 5 |
| ORTHOCLADIUS B | 1 |
| PSECTROCLADIUS C | 2 |
| THIENEMANIELL SP | 1 |
| CHELIFERA SP. | 1 |
| SIMULIUM SP. | 3 |
| HEXATOMA SP. | 10 |
| PHYSA SP. | 2 |
| OLIGOCHAETA LUMB | 2 |

| 02D-8 | |
|---|---|
| BAETIS FLAVISTRI | 7 |
| BAETIS HAGENI | 9 |
| BAETIS INSIGNIFI | 64 |
| BAETIS TRICAUDAT | 53 |
| ATTENELLA MARGAR | 2 |
| DRUNELLA GRANDIS | 2 |
| SERRATELLA TIBIA | 45 |
| EPEORUS ALBERTAE | 15 |
| RHITHROGENA HAGE | 4 |
| ALLOPERLA-GROUP | 9 |
| CALINEURIA CALIF | 5 |
| CLAASSENI SABULO | 11 |
| PTERONARCYS CALI | 8 |
| GLOSSOSOMA SP. | 4 |
| HELICOPSYCHE BOR | 1 |
| ARCTOPSYCHE GRAN | 7 |
| CHEUMATOPSYCHE | 17 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 21 |
| NEOTRICHIA SP. | 2 |
| DICOSMOECUS SP. | 1 |
| ONOCOSMOECUS SP. | 1 |
| WORMALDIA SP. | 1 |
| PSYCHOMYIA FLAVI | 1 |
| OPTIOSERVUS SPP. | 33 |
| ZAITZEVIA PARVUL | 52 |
| CLADOTANYSARSU B | 5 |
| MICROTENDIPES SP | 11 |
| POLYPEDILUM SP.A | 22 |
| TANYTARSUS SP. B | 114 |
| CARDIOCLADI SP.C | 1 |
| CORYNONEURA SP. | 1 |
| CRICOTOPUS SP. B | 1 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS B | 2 |
| PSECTROCLADIUS C | 1 |
| SIMULIUM SP. | 1 |
| ANTOCHA SP. | 3 |
| HEXATOMA SP. | 15 |
| PHYSA SP. | 11 |
| OLIGOCHAETA LUMB | 1 |

| 04A-8 | |
|---|---|
| BAETIS HAGENI | 1 |
| BAETIS INSIGNIFI | 68 |
| BAETIS TRICAUDAT | 57 |
| CENTROPTILU SP.A | 2 |
| ATTENELLA MARGAR | 30 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 27 |
| TIMPANOGA HECUBA | 1 |
| EPEORUS ALBERTAE | 3 |
| NIXE SIMPLICIOID | 33 |
| RHITHROGENA HAGE | 1 |
| TRICORYTHODES MI | 6 |
| ALLOPERLA-GROUP | 4 |
| ZAPADA CINCTIPES | 1 |
| HESPEROPERLA PAC | 1 |
| ISOGENOIDES ELON | 59 |
| SKWALA PARALLELA | 7 |
| PTERONARCELLA BA | 13 |
| PTERONARCYS CALI | 2 |
| RHAGOVELIA SP. | 16 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 19 |
| HYDROPSYCHE OCCI | 3 |
| SYMPHITOPS COCKE | 65 |
| HYDROPTILA SP. | 12 |
| NEOTRICHIA SP. | 1 |
| WORMALDIA SP. | 6 |
| PSYCHOMYIA FLAVI | 6 |
| OPTIOSERVUS SPP. | 5 |
| ZAITZEVIA PARVUL | 4 |
| MICROPSECTR SP.A | 3 |
| MICROTENDIPES SP | 5 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.A | 21 |
| TANYTARSUS SP. B | 5 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 15 |
| SIMULIUM SP. | 3 |

| 04B-8 | |
|---|---|
| BAETIS HAGENI | 3 |
| BAETIS INSIGNIFI | 105 |
| BAETIS TRICAUDAT | 123 |
| ATTENELLA MARGAR | 25 |
| DRUNELLA DODDSI | 1 |
| DRUNELLA GRANDIS | 12 |
| SERRATELLA TIBIA | 112 |
| EPEORUS ALBERTAE | 5 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 4 |
| RHITHROGENA HAGE | 8 |
| ALLOPERLA-GROUP | 1 |
| CALINEURIA CALIF | 1 |
| CLAASSENI SABULO | 3 |
| HESPEROPERLA PAC | 3 |
| ISOGENOIDES ELON | 35 |
| ISOPERLA QUINQUE | 2 |
| SKWALA PARALLELA | 5 |
| PTERONARCELLA BA | 34 |
| PTERONARCYS CALI | 6 |
| ARCTOPSYCHE GRAN | 21 |
| CHEUMATOPSYCHE | 34 |
| HYDROPSYCHE OCCI | 18 |
| SYMPHITOPS COCKE | 205 |
| HYDROPTILA SP. | 10 |
| NEOTRICHIA SP. | 4 |
| WORMALDIA SP. | 11 |
| PSYCHOMYIA FLAVI | 8 |
| PARARGYRACTIS SP | 1 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 16 |
| ATHERIX VARIEGAT | 1 |
| PALPOMY-GP SP. A | 1 |
| MICROPSECTR SP.A | 2 |
| MICROPSECTR SP.B | 1 |
| MICROTENDIPES SP | 4 |
| PARACLADOPE SP.B | 1 |
| POLYPEDILUM SP.A | 21 |
| POLYPEDILUM SP.C | 1 |
| TANYTARSUS SP. B | 11 |
| PAGASTIA SP. | 2 |
| CARDIOCLADI SP.C | 2 |
| CRICOTOPUS SP. B | 2 |
| EUKIEFFERIELLA B | 22 |
| EUKIEFFERIELLA E | 17 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS B | 13 |
| ORTHOCLADIUS NIG | 2 |
| ORTHOCLADIUS OBU | 4 |
| ABLABESMYIA SP. | 1 |
| CHELIFERA SP. | 1 |
| SIMULIUM SP. | 22 |
| ANTOCHA SP. | 6 |
| HEXATOMA SP. | 7 |

Table 16. Continued

| 04C-8 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 144 |
| BAETIS TRICAUDAT | 153 |
| CENTROPTILU SP.A | 5 |
| ATTENELLA MARGAR | 29 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 87 |
| TIMPANOGA HECUBA | 1 |
| EPEORUS ALBERTAE | 12 |
| NIXE CRIDDLEI | 3 |
| NIXE SIMPLICIOID | 9 |
| RHITHROGENA HAGE | 7 |
| PARALEPTOPHL DEB | 1 |
| TRICORYTHODES MI | 6 |
| ALLOPERLA-GROUP | 2 |
| CALINEURIA CALIF | 2 |
| CLAASSENI SABULO | 1 |
| HESPEROPERLA PAC | 1 |
| ISOGENOIDES ELON | 41 |
| SKWALA PARALLELA | 5 |
| PTERONARCELLA BA | 33 |
| PTERONARCYS CALI | 5 |
| ARCTOPSYCHE GRAN | 25 |
| CHEUMATOPSYCHE | 37 |
| HYDROPSYCHE OCCI | 5 |
| SYMPHITOPS COCKE | 217 |
| HYDROPTILA SP. | 12 |
| NEOTRICHIA SP. | 2 |
| WORMALDIA SP. | 18 |
| PSYCHOMYIA FLAVI | 5 |
| RHYACOPHILA ANGE | 1 |
| OPTIOSERVUS SPP. | 17 |
| ZAITZEVIA PARVUL | 21 |
| ATHERIX VARIEGAT | 1 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 2 |
| POLYPEDILUM SP.A | 19 |
| TANYTARSUS SP. B | 2 |
| CRICOTOPUS SP. B | 1 |
| EUKIEFFERIELLA B | 13 |
| EUKIEFFERIELLA E | 10 |
| EUKIEFFERIELLA G | 1 |
| EUKIEFFERIELLA H | 1 |
| ORTHOCLADIUS B | 13 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 7 |
| CHELIFERA SP. | 1 |
| SIMULIUM SP. | 33 |
| ANTOCHA SP. | 5 |
| HEXATOMA SP. | 3 |
| OLIGOCHAETA | 1 |

| 04D-8 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 135 |
| BAETIS TRICAUDAT | 228 |
| ATTENELLA MARGAR | 24 |
| DRUNELLA FLAVILI | 1 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 1 |
| SERRATELLA TIBIA | 200 |
| EPEORUS ALBERTAE | 16 |
| NIXE SIMPLICIOID | 8 |
| RHITHROGENA HAGE | 13 |
| TRICORYTHODES MI | 8 |
| ALLOPERLA-GROUP | 1 |
| ZAPADA CINCTIPES | 1 |
| CALINEURIA CALIF | 1 |
| CLAASSENI SABULO | 1 |
| HESPEROPERLA PAC | 1 |
| ISOGENOIDES ELON | 42 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 87 |
| PTERONARCYS CALI | 13 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 37 |
| CHEUMATOPSYCHE | 45 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | 294 |
| HYDROPTILA SP. | 4 |
| NEOTRICHIA SP. | 1 |
| OECETIS SP. A | 1 |
| WORMALDIA SP. | 15 |
| PSYCHOMYIA FLAVI | 27 |
| OPTIOSERVUS SPP. | 19 |
| ZAITZEVIA PARVUL | 17 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 5 |
| PHAENOPSECTRA SP | 3 |
| POLYPEDILUM SP.A | 31 |
| TANYTARSUS SP. B | 4 |
| CRICOTOPUS SP. B | 3 |
| EUKIEFFERIELLA B | 14 |
| EUKIEFFERIELLA E | 25 |
| ORTHOCLADIUS B | 19 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 14 |
| ABLABESMYIA SP. | 1 |
| SIMULIUM SP. | 30 |
| HEXATOMA SP. | 1 |

Table 16. Continued

| 05A-7 | |
|---|---|
| BAETIS HAGENI | 1 |
| BAETIS INSIGNIFI | 11 |
| BAETIS TRICAUDAT | 4 |
| ATTENELLA MARGAR | 11 |
| SERRATELLA TIBIA | 15 |
| EPEORUS ALBERTAE | 4 |
| NIXE SIMPLICIOID | 15 |
| RHITHROGENA HAGE | 2 |
| TRICORYTHODES MI | 8 |
| CLAASSENI SABULO | 1 |
| ISOGENOIDES ELON | 9 |
| SKWALA PARALLELA | 6 |
| PTERONARCELLA BA | 1 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 24 |
| HYDROPSYCHE OCCI | 3 |
| SYMPHITOPS COCKE | 112 |
| HYDROPTILA SP. | 1 |
| NEOTRICHIA SP. | 1 |
| WORMALDIA SP. | 3 |
| PSYCHOMYIA FLAVI | 1 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 2 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 1 |
| POLYPEDILUM SP.A | 15 |
| STEMPELLINELLA | 1 |
| TANYTARSUS SP. B | 6 |
| CORYNONEURA SP. | 1 |
| EUKIEFFERIELLA B | 2 |
| EUKIEFFERIELLA E | 14 |
| ORTHOCLADIUS B | 5 |
| ORTHOCLADIUS NIG | 1 |
| PSECTROCLADIUS B | 1 |
| HEXATOMA SP. | 2 |

| 05B-7 | |
|---|---|
| BAETIS INSIGNIFI | 7 |
| BAETIS TRICAUDAT | 3 |
| CENTROPTILU SP.A | 4 |
| ATTENELLA MARGAR | 10 |
| DRUNELLA FLAVILI | 1 |
| SERRATELLA TIBIA | 8 |
| TIMPANOGA HECUBA | 2 |
| EPEORUS ALBERTAE | 1 |
| NIXE SIMPLICIOID | 23 |
| PARALEPTOPHL BIC | 1 |
| TRICORYTHODES MI | 13 |
| ALLOPERLA-GROUP | 1 |
| CLAASSENI SABULO | 2 |
| ISOGENOIDES ELON | 7 |
| SKWALA PARALLELA | 1 |
| PTERONARCELLA BA | 1 |
| PTERONARCYS CALI | 1 |
| ZAITZEVIA PARVUL | 1 |
| CRYPTOCHIRONOMUS | 2 |
| MICROPSECTR SP.A | 1 |
| MICROTENDIPES SP | 4 |
| PARACLADOPE SP.B | 2 |
| POLYPEDILUM SP.A | 1 |
| TANYTARSUS SP. B | 2 |
| EUKIEFFERIELLA E | 3 |
| EUKIEFFERIELLA G | 1 |
| ORTHOCLADIUS B | 1 |
| ORTHOCLADIUS OBU | 2 |
| HEXATOMA SP. | 1 |
| PACIFASTICUS SP. | 1 |

Table 16. Continued

| 05C-7 | |
|---|---|
| BAETIS INSIGNIFI | 22 |
| BAETIS TRICAUDAT | 12 |
| CENTROPTILU SP.A | 1 |
| ATTENELLA MARGAR | 28 |
| SERRATELLA TIBIA | 28 |
| TIMPANOGA HECUBA | 1 |
| EPEORUS ALBERTAE | 6 |
| NIXE SIMPLICIOID | 18 |
| RHITHROGENA HAGE | 2 |
| TRICORYTHODES MI | 4 |
| ISOGENOIDES ELON | 21 |
| SKWALA PARALLELA | 3 |
| PTERONARCELLA BA | 2 |
| PTERONARCYS CALI | 1 |
| ARCTOPSYCHE GRAN | 24 |
| CHEUMATOPSYCHE | 23 |
| HYDROPSYCHE OCCI | 3 |
| SYMPHITOPS COCKE | 162 |
| HYDROPTILA SP. | 1 |
| WORMALDIA SP. | 6 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 2 |
| MICROPSECTR SP.A | 3 |
| MICROTENDIPES SP | 1 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.A | 6 |
| TANYTARSUS SP. B | 1 |
| EUKIEFFERIELLA A | 1 |
| EUKIEFFERIELLA E | 5 |
| ORTHOCLADIUS B | 3 |
| ORTHOCLADIUS NIG | 3 |
| ORTHOCLADIUS OBU | 3 |
| PARAMETRIOCNE SP | 1 |
| CHELIFERA SP. | 1 |
| HEXATOMA SP. | 1 |
| OLIGOCHAETA | 1 |

| 05D-7 | |
|---|---|
| BAETIS HAGENI | 6 |
| BAETIS INSIGNIFI | 26 |
| BAETIS TRICAUDAT | 23 |
| ATTENELLA MARGAR | 23 |
| SERRATELLA TIBIA | 42 |
| TIMPANOGA HECUBA | 2 |
| EPEORUS ALBERTAE | 6 |
| NIXE SIMPLICIOID | 18 |
| RHITHROGENA HAGE | 1 |
| PARALEPTOPHL BIC | 1 |
| TRICORYTHODES MI | 9 |
| ALLOPERLA-GROUP | 1 |
| CLAASSENI SABULO | 2 |
| HESPEROPERLA PAC | 3 |
| ISOGENOIDES ELON | 14 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 10 |
| PTERONARCYS CALI | 2 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 26 |
| CHEUMATOPSYCHE | 31 |
| HYDROPSYCHE OCCI | 2 |
| SYMPHITOPS COCKE | 213 |
| HYDROPTILA SP. | 2 |
| WORMALDIA SP. | 3 |
| OPTIOSERVUS SPP. | 1 |
| ZAITZEVIA PARVUL | 6 |
| MICROPSECTR SP.A | 1 |
| MICROTENDIPES SP | 1 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.A | 11 |
| TANYTARSUS SP. B | 2 |
| EUKIEFFERIELLA A | 1 |
| EUKIEFFERIELLA E | 18 |
| HETEROTRISSOCLAD | 1 |
| ORTHOCLADIUS B | 3 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 2 |
| ABLABESMYIA SP. | 1 |

Table 16. Continued

| 06A-7 | |
|---|---|
| BAETIS INSIGNIFI | 22 |
| BAETIS TRICAUDAT | 2 |
| CENTROPTILU SP.A | 2 |
| ATTENELLA MARGAR | 30 |
| SERRATELLA TIBIA | 3 |
| TIMPANOGA HECUBA | 1 |
| NIXE SIMPLICIOID | 32 |
| TRICORYTHODES MI | 37 |
| CLAASSENI SABULO | 1 |
| ISOGENOIDES ELON | 18 |
| SKWALA PARALLELA | 3 |
| PTERONARCELLA BA | 1 |
| ARCTOPSYCHE GRAN | 3 |
| CHEUMATOPSYCHE | 123 |
| SYMPHITOPS COCKE | 95 |
| HYDROPTILA SP. | 19 |
| NEOTRICHIA SP. | 1 |
| OECETIS SP. A | 1 |
| PSYCHOMYIA FLAVI | 5 |
| OPTIOSERVUS SPP. | 3 |
| ZAITZEVIA PARVUL | 11 |
| ATHERIX VARIEGAT | 1 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.A | 6 |
| MICROTENDIPES SP | 12 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.A | 13 |
| TANYTARSUS SP. B | 2 |
| PAGASTIA SP. | 1 |
| EUKIEFFERIELLA E | 3 |
| ORTHOCLADIUS B | 14 |
| ORTHOCLADIUS F | 1 |
| ORTHOCLADIUS OBU | 5 |
| CHELIFERA SP. | 3 |
| ANTOCHA SP. | 1 |
| HEXATOMA SP. | 1 |
| OLIGOCHAETA | 4 |

| 06B-7 | |
|---|---|
| BAETIS INSIGNIFI | 60 |
| BAETIS TRICAUDAT | 2 |
| CENTROPTILU SP.A | 4 |
| ATTENELLA MARGAR | 50 |
| EPHEMERELLA INFR | 1 |
| SERRATELLA TIBIA | 2 |
| TIMPANOGA HECUBA | 5 |
| EPEORUS ALBERTAE | 1 |
| NIXE SIMPLICIOID | 34 |
| TRICORYTHODES MI | 57 |
| ISOGENOIDES ELON | 18 |
| SKWALA PARALLELA | 4 |
| CHEUMATOPSYCHE | 71 |
| SYMPHITOPS COCKE | 70 |
| OECETIS SP. A | 1 |
| DICOSMOECUS SP. | 1 |
| PSYCHOMYIA FLAVI | 14 |
| OREODYTES SCITIL | 1 |
| OPTIOSERVUS SPP. | 3 |
| ZAITZEVIA PARVUL | 12 |
| MICROPSECTR SP.A | 5 |
| MICROTENDIPES SP | 21 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.A | 12 |
| TANYTARSUS SP. B | 3 |
| TANYTARSUS SP. C | 1 |
| PAGASTIA SP. | 1 |
| EUKIEFFERIELLA E | 8 |
| EUKIEFFERIELLA G | 1 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 12 |
| ABLABESMYIA SP. | 1 |
| CHELIFERA SP. | 2 |
| OLIGOCHAETA | 7 |

Table 16. Continued

| 06C-7 | |
|---|---|
| BAETIS HAGENI | 1 |
| BAETIS INSIGNIFI | 61 |
| BAETIS TRICAUDAT | 2 |
| CENTROPTILU SP.A | 17 |
| ATTENELLA MARGAR | 59 |
| SERRATELLA TIBIA | 3 |
| TIMPANOGA HECUBA | 19 |
| EPEORUS ALBERTAE | 2 |
| NIXE CRIDDLEI | 1 |
| NIXE SIMPLICIOID | 53 |
| PARALEPTOPHL BIC | 11 |
| TRICORYTHODES MI | 90 |
| ISOGENOIDES ELON | 13 |
| SKWALA PARALLELA | 3 |
| PTERONARCYS CALI | 1 |
| OPHIOGOMPHUS SP. | 1 |
| SIGARA SP. | 8 |
| RHAGOVELIA SP. | 1 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 5 |
| CHEUMATOPSYCHE | 139 |
| HYDROPSYCHE OCCI | 2 |
| SYMPHITOPS COCKE | 138 |
| HYDROPTILA SP. | 23 |
| NEOTRICHIA SP. | 1 |
| WORMALDIA SP. | 1 |
| PSYCHOMYIA FLAVI | 11 |
| OREODYTES SCITIL | 8 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 19 |
| MICROPSECTR SP.A | 6 |
| MICROTENDIPES SP | 7 |
| PHAENOPSECTRA SP | 6 |
| POLYPEDILUM SP.A | 19 |
| TANYTARSUS SP. B | 3 |
| TANYTARSUS SP. C | 1 |
| CORYNONEURA SP. | 1 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 12 |
| EUKIEFFERIELLA G | 1 |
| ORTHOCLADIUS B | 16 |
| ORTHOCLADIUS OBU | 7 |
| ABLABESMYIA SP. | 1 |
| CHELIFERA SP. | 3 |
| OLIGOCHAETA | 2 |

| 06D-7 | |
|---|---|
| BAETIS INSIGNIFI | 78 |
| BAETIS TRICAUDAT | 8 |
| CENTROPTILU SP.A | 14 |
| ATTENELLA MARGAR | 61 |
| SERRATELLA TIBIA | 7 |
| TIMPANOGA HECUBA | 23 |
| NIXE CRIDDLEI | 3 |
| NIXE SIMPLICIOID | 40 |
| RHITHROGENA HAGE | 1 |
| PARALEPTOPHL BIC | 2 |
| TRICORYTHODES MI | 99 |
| HESPEROPERLA PAC | 1 |
| ISOGENOIDES ELON | 10 |
| PTERONARCELLA BA | 1 |
| PTERONARCYS CALI | 2 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 10 |
| CHEUMATOPSYCHE | 77 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 134 |
| HYDROPTILA SP. | 16 |
| WORMALDIA SP. | 1 |
| PSYCHOMYIA FLAVI | 4 |
| OREODYTES SCITIL | 3 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 9 |
| MICROPSECTR SP.A | 5 |
| MICROTENDIPES SP | 7 |
| POLYPEDILUM SP.A | 17 |
| TANYTARSUS SP. B | 2 |
| TANYTARSUS SP. C | 3 |
| PAGASTIA SP. | 1 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 10 |
| EUKIEFFERIELLA G | 1 |
| ORTHOCLADIUS B | 11 |
| ORTHOCLADIUS F | 1 |
| ORTHOCLADIUS OBU | 11 |
| ABLABESMYIA SP. | 2 |
| CHELIFERA SP. | 2 |
| HEXATOMA SP. | 1 |
| OLIGOCHAETA | 2 |

| 08A-7Q | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 84 |
| BAETIS TRICAUDAT | 12 |
| CENTROPTILU SP.A | 20 |
| ATTENELLA MARGAR | 60 |
| TIMPANOGA HECUBA | 4 |
| EPEORUS ALBERTAE | 4 |
| NIXE SIMPLICIOID | 36 |
| PARALEPTOPHL BIC | 16 |
| TRICORYTHODES MI | 476 |
| MALENKA SP. | 4 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 8 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 12 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 72 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | 136 |
| HYDROPTILA SP. | 8 |
| NEOTRICHIA SP. | 4 |
| PSYCHOMYIA FLAVI | 8 |
| ZAITZEVIA PARVUL | 4 |
| CHIRONOMUS SP. | 8 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 40 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 136 |
| POLYPEDILUM SP.C | 8 |
| TANYTARSUS SP. B | 32 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 16 |
| EUKIEFFERIELLA E | 8 |
| EUKIEFFERIELLA G | 4 |
| ORTHOCLADIUS B | 32 |
| ANTOCHA SP. | 8 |
| OLIGOCHAETA | 172 |

| 08B-7Q | |
|---|---|
| BAETIS FLAVISTRI | 4 |
| BAETIS INSIGNIFI | 28 |
| BAETIS TRICAUDAT | 4 |
| ATTENELLA MARGAR | 52 |
| TIMPANOGA HECUBA | 4 |
| NIXE SIMPLICIOID | 32 |
| PARALEPTOPHL BIC | 8 |
| TRICORYTHODES MI | 260 |
| ISOGENOIDES ELON | 8 |
| SKWALA PARALLELA | 4 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 36 |
| HYDROPSYCHE OCCI | 12 |
| SYMPHITOPS COCKE | 64 |
| HYDROPTILA SP. | 12 |
| OECETIS SP. A | 12 |
| WORMALDIA SP. | 4 |
| PSYCHOMYIA FLAVI | 4 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 4 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 36 |
| POLYPEDILUM SP.A | 132 |
| TANYTARSUS SP. B | 16 |
| PAGASTIA SP. | 12 |
| CARDIOCLADI SP.C | 8 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS B | 24 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 8 |
| ABLABESMYIA SP. | 4 |
| OLIGOCHAETA | 92 |

Table 16. Continued

| 08C-7Q | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 80 |
| BAETIS TRICAUDAT | 20 |
| CENTROPTILU SP.A | 16 |
| n.k. ~~ANTROPTILUM~~ CENTROPTILUM SP.B | 4 |
| ATTENELLA MARGAR | 40 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 8 |
| TIMPANOGA HECUBA | 12 |
| EPEORUS ALBERTAE | 4 |
| NIXE CRIDDLEI | 8 |
| NIXE SIMPLICIOID | 12 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 180 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA QUINQUE | 4 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 12 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 68 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | 148 |
| HYDROPTILA SP. | 8 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 8 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 4 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 12 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 80 |
| POLYPEDILUM SP.C | 4 |
| TANYTARSUS SP. B | 20 |
| TANYTARSUS SP. C | 4 |
| CARDIOCLADI SP.C | 12 |
| CRICOTOPUS SP. B | 8 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 16 |
| ORTHOCLADIUS B | 12 |
| ABLABESMYIA SP. | 4 |
| OLIGOCHAETA | 112 |

| 08D-7Q | |
|---|---|
| BAETIS INSIGNIFI | 100 |
| BAETIS TRICAUDAT | 12 |
| CENTROPTILU SP.A | 20 |
| ATTENELLA MARGAR | 44 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 4 |
| TIMPANOGA HECUBA | 4 |
| NIXE CRIDDLEI | 12 |
| NIXE SIMPLICIOID | 36 |
| TRICORYTHODES MI | 304 |
| ISOGENOIDES ELON | 12 |
| ISOPERLA QUINQUE | 4 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 16 |
| CHEUMATOPSYCHE | 56 |
| HYDROPSYCHE OCCI | 12 |
| SYMPHITOPS COCKE | 160 |
| HYDROPTILA SP. | 4 |
| NEOTRICHIA SP. | 4 |
| PSYCHOMYIA FLAVI | 12 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 8 |
| MICROTENDIPES SP | 28 |
| PHAENOPSECTRA SP | 8 |
| POLYPEDILUM SP.A | 132 |
| POLYPEDILUM SP.C | 12 |
| TANYTARSUS SP. B | 44 |
| TANYTARSUS SP. C | 4 |
| MONODIAMESA SP. | 4 |
| CARDIOCLADI SP.C | 4 |
| CRICOTOPUS SP. B | 8 |
| EUKIEFFERIELLA E | 24 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS B | 64 |
| ORTHOCLADIUS OBU | 20 |
| ANTOCHA SP. | 4 |
| OLIGOCHAETA | 316 |
| OLIGOCHAETA LUMB | 8 |

| 09A-7Q | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 128 |
| BAETIS TRICAUDAT | 4 |
| ATTENELLA MARGAR | 52 |
| SERRATELLA TIBIA | 4 |
| TIMPANOGA HECUBA | 4 |
| EPEORUS ALBERTAE | 8 |
| NIXE CRIDDLEI | 4 |
| NIXE SIMPLICIOID | 44 |
| TRICORYTHODES MI | 60 |
| ISOGENOIDES ELON | 20 |
| ISOPERLA QUINQUE | 4 |
| PTERONARCYS CALI | 4 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 36 |
| HYDROPSYCHE OCCI | 8 |
| SYMPHITOPS COCKE | 44 |
| HYDROPTILA SP. | 32 |
| PSYCHOMYIA FLAVI | 8 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 4 |
| MICROPSECTR SP.A | 12 |
| MICROPSECTR SP.C | 4 |
| MICROTENDIPES SP | 12 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 40 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 16 |
| ORTHOCLADIUS B | 36 |
| ORTHOCLADIUS OBU | 20 |
| ANTOCHA SP. | 4 |
| HEXATOMA SP. | 16 |

| 09B-7Q | |
|---|---|
| BAETIS HAGENI | 12 |
| BAETIS INSIGNIFI | 236 |
| BAETIS TRICAUDAT | 64 |
| ATTENELLA MARGAR | 40 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 40 |
| TIMPANOGA HECUBA | 8 |
| EPEORUS ALBERTAE | 16 |
| NIXE CRIDDLEI | 4 |
| NIXE SIMPLICIOID | 28 |
| RHITHROGENA HAGE | 4 |
| PARALEPTOPHL BIC | 4 |
| PARALEPTOPH DEB | 12 |
| TRICORYTHODES MI | 60 |
| ISOGENOIDES ELON | 24 |
| ARCTOPSYCHE GRAN | 24 |
| CHEUMATOPSYCHE | 140 |
| HYDROPSYCHE OCCI | 24 |
| SYMPHITOPS COCKE | 152 |
| HYDROPTILA SP. | 36 |
| OREODYTES SCITIL | 8 |
| ZAITZEVIA PARVUL | 12 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 8 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 100 |
| POLYPEDILUM SP.C | 4 |
| TANYTARSUS SP. B | 8 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA E | 28 |
| ORTHOCLADIUS B | 32 |
| ORTHOCLADIUS OBU | 20 |
| ABLABESMYIA SP. | 4 |
| CHELIFERA SP. | 4 |
| HEXATOMA SP. | 4 |
| OLIGOCHAETA | 4 |

| 09C-7Q | |
|---|---|
| BAETIS INSIGNIFI | 124 |
| BAETIS TRICAUDAT | 4 |
| CENTROPTILU SP.A | 12 |
| ATTENELLA MARGAR | 36 |
| SERRATELLA TIBIA | 12 |
| TIMPANOGA HECUBA | 4 |
| EPEORUS ALBERTAE | 4 |
| NIXE CRIDDLEI | 4 |
| NIXE SIMPLICIOID | 40 |
| PARALEPTOPHL BIC | 4 |
| PARALEPTOPHL DEB | ~~0~~ 16 M.K. |
| TRICORYTHODES MI | 64 |
| ISOGENOIDES ELON | 16 |
| SKWALA PARALLELA | 4 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 32 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | 44 |
| HYDROPTILA SP. | 80 |
| PSYCHOMYIA FLAVI | 4 |
| OREODYTES SCITIL | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 4 |
| CRYPTOCHIRONOMUS | 4 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 24 |
| PHAENOPSECTRA SP | 8 |
| POLYPEDILUM SP.A | 44 |
| TANYTARSUS SP. B | 8 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS B | 16 |
| ORTHOCLADIUS OBU | 12 |

| 09D-7Q | |
|---|---|
| BAETIS INSIGNIFI | 264 |
| BAETIS TRICAUDAT | 40 |
| CENTROPTILU SP.A | 4 |
| ATTENELLA MARGAR | 68 |
| SERRATELLA TIBIA | 36 |
| EPEORUS ALBERTAE | 4 |
| NIXE SIMPLICIOID | 36 |
| TRICORYTHODES MI | 56 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 8 |
| PTERONARCELLA BA | 12 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 28 |
| CHEUMATOPSYCHE | 228 |
| HYDROPSYCHE OCCI | 108 |
| SYMPHITOPS COCKE | 172 |
| HYDROPTILA SP. | 88 |
| OECETIS SP. A | 8 |
| PSYCHOMYIA FLAVI | 20 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 16 |
| CRYPTOCHIRONOMUS | 4 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 12 |
| PARATANYTARSUS | 4 |
| PHAENOPSECTRA SP | 8 |
| POLYPEDILUM SP.A | 68 |
| POLYPEDILUM SP.C | 8 |
| TANYTARSUS SP. B | 4 |
| PAGASTIA SP. | 8 |
| EUKIEFFERIELLA B | 8 |
| EUKIEFFERIELLA E | 28 |
| EUKIEFFERIELLA G | 4 |
| ORTHOCLADIUS B | 32 |
| ORTHOCLADIUS OBU | 36 |
| SIMULIUM SP. | 4 |
| ANTOCHA SP. | 4 |

| 10A-7 | |
|---|---|
| BAETIS INSIGNIFI | 51 |
| BAETIS TRICAUDAT | 16 |
| ATTENELLA MARGAR | 44 |
| DRUNELLA FLAVILI | 1 |
| EPHEMERELLA INFR | 9 |
| SERRATELLA TIBIA | 12 |
| EPEORUS ALBERTAE | 2 |
| NIXE SIMPLICIOID | 16 |
| RHITHROGENA HAGE | 16 |
| TRICORYTHODES MI | 1 |
| CLAASSENI SABULO | 1 |
| ISOGENOIDES ELON | 5 |
| SKWALA PARALLELA | 6 |
| PTERONARCELLA BA | 4 |
| PROTOPTILA SP. | 1 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 10 |
| HYDROPSYCHE OCCI | 2 |
| SYMPHITOPS COCKE | 16 |
| HYDROPTILA SP. | 1 |
| OPTIOSERVUS SPP. | 23 |
| ZAITZEVIA PARVUL | 6 |
| MICROPSECTR SP.A | 6 |
| MICROTENDIPES SP | 1 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.A | 8 |
| TANYTARSUS SP. B | 8 |
| CARDIOCLADI SP.B | 1 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 3 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS C | 1 |
| ORTHOCLADIUS NIG | 3 |
| ORTHOCLADIUS OBU | 8 |
| SYNORTHOCLADIUS | 1 |
| CHELIFERA SP. | 2 |
| SIMULIUM SP. | 12 |
| HEXATOMA SP. | 1 |
| PISIDIUM SP. | 1 |
| OLIGOCHAETA LUMB | 8 |

| 10B-7 | |
|---|---|
| AMETROPUS SP. | 1 |
| BAETIS INSIGNIFI | 61 |
| BAETIS TRICAUDAT | 35 |
| ATTENELLA MARGAR | 36 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 11 |
| SERRATELLA TIBIA | 16 |
| NIXE SIMPLICIOID | 44 |
| RHITHROGENA HAGE | 13 |
| TRICORYTHODES MI | 1 |
| CLAASSENI SABULO | 1 |
| ISOGENOIDES ELON | 3 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 5 |
| GLOSSOSOMA SP. | 3 |
| ARCTOPSYCHE GRAN | 3 |
| CHEUMATOPSYCHE | 6 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 13 |
| OPTIOSERVUS SPP. | 42 |
| ZAITZEVIA PARVUL | 20 |
| MICROPSECTR SP.A | 2 |
| POLYPEDILUM SP.A | 4 |
| TANYTARSUS SP. B | 1 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS B | 1 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 3 |
| CHELIFERA SP. | 1 |
| OLIGOCHAETA LUMB | 6 |
| HIRUDINEA | 2 |

Table 16. Continued

| 10C-7 | |
|---|---|
| BAETIS INSIGNIFI | 28 |
| BAETIS TRICAUDAT | 22 |
| ATTENELLA MARGAR | 47 |
| EPHEMERELLA INFR | 11 |
| SERRATELLA TIBIA | 13 |
| EPEORUS ALBERTAE | 2 |
| NIXE SIMPLICIOID | 23 |
| RHITHROGENA HAGE | 34 |
| TRICORYTHODES MI | 3 |
| ISOGENOIDES ELON | 12 |
| SKWALA PARALLELA | 1 |
| PTERONARCELLA BA | 6 |
| GLOSSOSOMA SP. | 5 |
| ARCTOPSYCHE GRAN | 3 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 6 |
| HYDROPTILA SP. | 2 |
| OPTIOSERVUS SPP. | 35 |
| ZAITZEVIA PARVUL | 13 |
| CLADOTANYTA SP.A | 4 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 1 |
| POLYPEDILUM SP.A | 2 |
| TANYTARSUS SP. B | 6 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS OBU | 2 |
| THIENEMANIELL SP | 1 |
| ABLABESMYIA SP. | 1 |
| CHELIFERA SP. | 1 |
| SIMULIUM SP. | 29 |
| PROTANYDERUS SP. | 1 |
| HEXATOMA SP. | 1 |
| OLIGOCHAETA | 5 |
| OLIGOCHAETA LUMB | 3 |

| 10D-7 | |
|---|---|
| BAETIS INSIGNIFI | 127 |
| BAETIS TRICAUDAT | 13 |
| ATTENELLA MARGAR | 97 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 25 |
| SERRATELLA TIBIA | 24 |
| TIMPANOGA HECUBA | 1 |
| EPEORUS ALBERTAE | 1 |
| NIXE SIMPLICIOID | 78 |
| RHITHROGENA HAGE | 17 |
| PARALEPTOPHL BIC | 3 |
| TRICORYTHODES MI | 15 |
| CLAASSENI SABULO | 2 |
| ISOGENOIDES ELON | 10 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 8 |
| BRACHYCENTRUS OC | 2 |
| GLOSSOSOMA SP. | 1 |
| ARCTOPSYCHE GRAN | 3 |
| CHEUMATOPSYCHE | 22 |
| HYDROPSYCHE SP.A | 1 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 21 |
| HYDROPTILA SP. | 10 |
| NEOTRICHIA SP. | 1 |
| OPTIOSERVUS SPP. | 46 |
| ZAITZEVIA PARVUL | 33 |
| CLADOTANYTA SP.A | 1 |
| MICROPSECTR SP.A | 16 |
| MICROTENDIPES SP | 1 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.A | 7 |
| TANYTARSUS SP. B | 6 |
| TANYTARSUS SP. C | 1 |
| CRICOTOPUS SP. B | 3 |
| EUKIEFFERIELLA B | 3 |
| EUKIEFFERIELLA E | 6 |
| ORTHOCLADIUS B | 1 |
| ORTHOCLADIUS OBU | 4 |
| CHELIFERA SP. | 5 |
| SIMULIUM SP. | 3 |
| HEXATOMA SP. | 1 |
| OLIGOCHAETA | 5 |
| OLIGOCHAETA LUMB | 4 |

Table 16. Continued

| 11A-7 | |
|---|---|
| BAETIS HAGENI | 1 |
| BAETIS INSIGNIFI | 225 |
| BAETIS TRICAUDAT | 63 |
| ATTENELLA MARGAR | 50 |
| EPHEMERELLA INFR | 15 |
| SERRATELLA TIBIA | 30 |
| EPEORUS ALBERTAE | 2 |
| NIXE SIMPLICIOID | 193 |
| RHITHROGENA HAGE | 16 |
| PARALEPTOPHL BIC | 1 |
| PARALEPTOPHL DEB | 1 |
| CLAASSENI SABULO | 1 |
| ISOGENOIDES ELON | 25 |
| SKWALA PARALLELA | 1 |
| PTERONARCELLA BA | 6 |
| PTERONARCYS CALI | 1 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 14 |
| HYDROPSYCHE OCCI | 188 |
| SYMPHITOPS COCKE | 20 |
| HYDROPTILA SP. | 38 |
| OECETIS SP. A | 1 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 3 |
| ATHERIX VARIEGAT | 3 |
| MICROPSECTR SP.A | 18 |
| MICROTENDIPES SP | 3 |
| POLYPEDILUM SP.A | 35 |
| POLYPEDILUM SP.C | 2 |
| CRICOTOPUS SP. B | 11 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 13 |
| ORTHOCLADIUS B | 19 |
| ORTHOCLADIUS OBU | 12 |
| SYNORTHOCLADIUS | 2 |
| CHELIFERA SP. | 7 |
| SIMULIUM SP. | 15 |
| PROTANYDERUS SP. | 1 |
| HEXATOMA SP. | 5 |

| 11B-7 | |
|---|---|
| BAETIS INSIGNIFI | 149 |
| BAETIS TRICAUDAT | 67 |
| ATTENELLA MARGAR | 28 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 9 |
| SERRATELLA TIBIA | 17 |
| EPEORUS ALBERTAE | 1 |
| NIXE SIMPLICIOID | 72 |
| RHITHROGENA HAGE | 64 |
| TRICORYTHODES MI | 9 |
| ISOGENOIDES ELON | 12 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 7 |
| PTERONARCYS CALI | 1 |
| ARCTOPSYCHE GRAN | 7 |
| CHEUMATOPSYCHE | 10 |
| HYDROPSYCHE OCCI | 125 |
| SYMPHITOPS COCKE | 11 |
| HYDROPTILA SP. | 22 |
| NEOTRICHIA SP. | 1 |
| OREODYTES SCITIL | 3 |
| OPTIOSERVUS SPP. | 1 |
| ZAITZEVIA PARVUL | 6 |
| ATHERIX VARIEGAT | 1 |
| MICROPSECTR SP.A | 6 |
| MICROPSECTR SP.C | 1 |
| MICROTENDIPES SP | 5 |
| PARATANYTARSUS | 1 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 14 |
| POLYPEDILUM SP.C | 3 |
| CRICOTOPUS SP. B | 3 |
| EUKIEFFERIELLA B | 5 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 5 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 11 |
| CHELIFERA SP. | 8 |
| SIMULIUM SP. | 59 |
| HEXATOMA SP. | 1 |

Table 16. Continued

| 11C-7 | |
|---|---|
| BAETIS INSIGNIFI | 126 |
| BAETIS TRICAUDAT | 34 |
| CENTROPTILU SP.A | 4 |
| ATTENELLA MARGAR | 24 |
| EPHEMERELLA INFR | 13 |
| SERRATELLA TIBIA | 7 |
| EPEORUS ALBERTAE | 1 |
| NIXE CRIDDLEI | 1 |
| NIXE SIMPLICIOID | 49 |
| RHITHROGENA HAGE | 44 |
| TRICORYTHODES MI | 15 |
| CLAASSENI SABULO | 2 |
| ISOGENOIDES ELON | 8 |
| PTERONARCELLA BA | 1 |
| PTERONARCYS CALI | 2 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 6 |
| HYDROPSYCHE OCCI | 91 |
| SYMPHITOPS COCKE | 17 |
| HYDROPTILA SP. | 15 |
| OPTIOSERVUS SPP. | 5 |
| ZAITZEVIA PARVUL | 4 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.A | 9 |
| MICROPSECTR SP.C | 3 |
| MICROTENDIPES SP | 6 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.A | 8 |
| CARDIOCLADI SP.C | 2 |
| CRICOTOPUS SP. B | 10 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS B | 3 |
| ORTHOCLADIUS OBU | 5 |
| CHELIFERA SP. | 2 |
| SIMULIUM SP. | 53 |
| OLIGOCHAETA | 1 |

| 11D-7 | |
|---|---|
| BAETIS INSIGNIFI | 131 |
| BAETIS TRICAUDAT | 44 |
| CENTROPTILU SP.A | 3 |
| ATTENELLA MARGAR | 30 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 9 |
| SERRATELLA TIBIA | 5 |
| NIXE CRIDDLEI | 1 |
| NIXE SIMPLICIOID | 45 |
| RHITHROGENA HAGE | 63 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 8 |
| CLAASSENI SABULO | 2 |
| ISOGENOIDES ELON | 11 |
| SKWALA PARALLELA | 1 |
| PTERONARCELLA BA | 6 |
| ARCTOPSYCHE GRAN | 9 |
| CHEUMATOPSYCHE | 7 |
| HYDROPSYCHE OCCI | 65 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 8 |
| OREODYTES SCITIL | 1 |
| OPTIOSERVUS SPP. | 6 |
| ZAITZEVIA PARVUL | 3 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 4 |
| POLYPEDILUM SP.A | 12 |
| CARDIOCLADI SP.C | 1 |
| CRICOTOPUS SP. B | 6 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 6 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 7 |
| SIMULIUM SP. | 40 |
| HEXATOMA SP. | 1 |

Table 16. Continued

| 13A-7H | |
|---|---|
| BAETIS INSIGNIFI | 92 |
| BAETIS TRICAUDAT | 8 |
| CENTROPTILU SP.A | 72 |
| ATTENELLA MARGAR | 58 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 2 |
| NIXE SIMPLICIOID | 340 |
| PARALEPTOPHL BIC | 8 |
| PARALEPTOPHL DEB | 12 |
| TRICORYTHODES MI | 48 |
| ISOGENOIDES ELON | 6 |
| SKWALA PARALLELA | 2 |
| CHEUMATOPSYCHE | 2 |
| HYDROPSYCHE OCCI | 4 |
| HYDROPTILA SP. | 12 |
| OECETIS SP. A | 4 |
| OREODYTES SCITIL | 8 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 2 |
| ATHERIX VARIEGAT | 2 |
| MICROPSECTR SP.A | 6 |
| MICROTENDIPES SP | 10 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.A | 10 |
| TANYTARSUS SP. B | 4 |
| CARDIOCLADI SP.C | 2 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS OBU | 8 |
| ABLABESMYIA SP. | 2 |
| CHELIFERA SP. | 2 |
| HEXATOMA SP. | 6 |

| 13B-7H | |
|---|---|
| BAETIS INSIGNIFI | 58 |
| BAETIS TRICAUDAT | 10 |
| CENTROPTILU SP.A | 34 |
| ATTENELLA MARGAR | 58 |
| DRUNELLA GRANDIS | 2 |
| EPHEMERELLA INFR | 12 |
| NIXE SIMPLICIOID | 214 |
| PARALEPTOPHL BIC | 8 |
| PARALEPTOPHL DEB | 8 |
| TRICORYTHODES MI | 20 |
| ISOGENOIDES ELON | 28 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 8 |
| SYMPHITOPS COCKE | 10 |
| HYDROPTILA SP. | 24 |
| OECETIS SP. A | 4 |
| OREODYTES SCITIL | 4 |
| MICROPSECTR SP.A | 6 |
| POLYPEDILUM SP.A | 6 |
| POLYPEDILUM SP.C | 6 |
| EUKIEFFERIELLA B | 2 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 4 |
| ABLABESMYIA SP. | 2 |
| HEXATOMA SP. | 2 |
| OLIGOCHAETA | 2 |

Table 16. Continued

| 13C-7H | |
|---|---|
| BAETIS INSIGNIFI | 62 |
| BAETIS TRICAUDAT | 2 |
| CENTROPTILU SP.A | 50 |
| ATTENELLA MARGAR | 106 |
| EPHEMERELLA INFR | 18 |
| NIXE SIMPLICIOID | 294 |
| PARALEPTOPHL BIC | 18 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 92 |
| ISOGENOIDES ELON | 20 |
| ISOPERLA QUINQUE | 2 |
| ARCTOPSYCHE GRAN | 14 |
| CHEUMATOPSYCHE | 2 |
| HYDROPSYCHE OCCI | 8 |
| HYDROPTILA SP. | 46 |
| LEPIDOSTOMA SP.A | 2 |
| OECETIS SP. A | 4 |
| OREODYTES SCITIL | 6 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 4 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 10 |
| PARACLADOPE SP.B | 2 |
| PHAENOPSECTRA SP | 12 |
| POLYPEDILUM SP.A | 14 |
| POLYPEDILUM SP.C | 4 |
| TANYTARSUS SP. B | 4 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 8 |
| HEXATOMA SP. | 8 |
| OLIGOCHAETA | 26 |

| 13D-7H | |
|---|---|
| BAETIS INSIGNIFI | 52 |
| BAETIS TRICAUDAT | 2 |
| CENTROPTILU SP.A | 36 |
| ATTENELLA MARGAR | 58 |
| EPHEMERELLA INFR | 18 |
| NIXE SIMPLICIOID | ~~80~~ 280 MK. |
| PARALEPTOPHL BIC | 4 |
| PARALEPTOPHL DEB | 10 |
| TRICORYTHODES MI | 52 |
| CLAASSENI SABULO | 4 |
| ISOGENOIDES ELON | 24 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 2 |
| HYDROPSYCHE OCCI | 2 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 36 |
| OECETIS SP. A | 6 |
| OPTIOSERVUS SPP. | 2 |
| ATHERIX VARIEGAT | 2 |
| MICROPSECTR SP.A | 6 |
| MICROPSECTR SP.C | 2 |
| MICROTENDIPES SP | 6 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 2 |
| POLYPEDILUM SP.C | 2 |
| EUKIEFFERIELLA B | 2 |
| ORTHOCLADIUS OBU | 6 |
| ABLABESMYIA SP. | 2 |
| OLIGOCHAETA | 10 |

Table 16. Continued

14A-7Q

| | |
|---|---|
| BAETIS INSIGNIFI | 204 |
| BAETIS TRICAUDAT | 16 |
| ATTENELLA MARGAR | 24 |
| TIMPANOGA HECUBA | 8 |
| NIXE SIMPLICIOID | 140 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 44 |
| ISOGENOIDES ELON | 4 |
| HYDROPSYCHE OCCI | 8 |
| HYDROPTILA SP. | 72 |
| OECETIS SP. A | 8 |
| ZAITZEVIA PARVUL | 4 |
| CRYPTOCHIRONOMUS | 8 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 224 |
| PHAENOPSECTRA SP | 24 |
| POLYPEDILUM SP.A | 48 |
| TANYTARSUS SP. B | 4 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 4 |
| ABLABESMYIA SP. | 4 |
| OLIGOCHAETA | 28 |

14B-7Q

| | |
|---|---|
| BAETIS INSIGNIFI | 76 |
| BAETIS TRICAUDAT | 4 |
| ATTENELLA MARGAR | 24 |
| EPHEMERELLA INFR | 8 |
| NIXE SIMPLICIOID | 80 |
| TRICORYTHODES MI | 40 |
| ISOGENOIDES ELON | 4 |
| CHEUMATOPSYCHE | 8 |
| HYDROPSYCHE OCCI | 8 |
| HYDROPTILA SP. | 100 |
| OPTIOSERVUS SPP. | 4 |
| CRYPTOCHIRONOMUS | 4 |
| DICROTENDIP SP.C | 4 |
| MICROTENDIPES SP | 128 |
| POLYPEDILUM SP.A | 12 |
| ORTHOCLADIUS OBU | 12 |
| SIMULIUM SP. | 4 |
| HEXATOMA SP. | 8 |
| OLIGOCHAETA | 32 |

14C-7Q

| | |
|---|---|
| BAETIS INSIGNIFI | 164 |
| BAETIS TRICAUDAT | 28 |
| CENTROPTILU SP.A | 4 |
| ATTENELLA MARGAR | 36 |
| NIXE CRIDDLEI | 8 |
| NIXE SIMPLICIOID | 140 |
| TRICORYTHODES MI | 28 |
| ISOGENOIDES ELON | 16 |
| BRACHYCENTRUS OC | 8 |
| CHEUMATOPSYCHE | 24 |
| HYDROPSYCHE OCCI | 12 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 32 |
| OECETIS SP. A | 4 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 4 |
| MICROTENDIPES SP | 16 |
| POLYPEDILUM SP.A | 4 |
| CARDIOCLADI SP.C | 4 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 12 |
| SIMULIUM SP. | 4 |
| OLIGOCHAETA | 12 |

14D-7Q

| | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 248 |
| BAETIS TRICAUDAT | 16 |
| CENTROPTILU SP.A | 4 |
| ATTENELLA MARGAR | 80 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 8 |
| NIXE SIMPLICIOID | 160 |
| TRICORYTHODES MI | 28 |
| CLAASSENI SABULO | 4 |
| ISOGENOIDES ELON | 16 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 32 |
| HYDROPSYCHE OCCI | 32 |
| SYMPHITOPS COCKE | 4 |
| SYMPHITOPS SLOSS | 4 |
| HYDROPTILA SP. | 116 |
| OECETIS SP. A | 4 |
| MICROPSECTR SP.A | 12 |
| MICROTENDIPES SP | 80 |
| POLYPEDILUM SP.A | 16 |
| POLYPEDILUM SP.C | 4 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 24 |
| HEXATOMA SP. | 4 |
| OLIGOCHAETA | 12 |

Table 16. Continued

| 15A-7H | |
|---|---|
| BAETIS INSIGNIFI | 156 |
| BAETIS TRICAUDAT | 94 |
| ATTENELLA MARGAR | 26 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 20 |
| NIXE SIMPLICIOID | 80 |
| RHITHROGENA HAGE | 2 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 6 |
| CLAASSENI SABULO | 6 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 16 |
| HYDROPSYCHE OCCI | 150 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 2 |
| OREODYTES SCITIL | 4 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 2 |
| MICROPSECTR SP.A | 18 |
| MICROTENDIPES SP | 12 |
| PHAENOPSECTRA SP | 16 |
| POLYPEDILUM SP.A | 42 |
| ROBACKIA SP. | 2 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA E | 6 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 14 |
| SYNORTHOCLADIUS | 4 |
| ABLABESMYIA SP. | 2 |
| SIMULIUM SP. | 10 |

| 15B-7H | |
|---|---|
| BAETIS INSIGNIFI | 154 |
| BAETIS TRICAUDAT | 46 |
| ATTENELLA MARGAR | 40 |
| EPHEMERELLA INFR | 8 |
| SERRATELLA TIBIA | 14 |
| NIXE SIMPLICIOID | 80 |
| RHITHROGENA HAGE | 4 |
| PARALEPTOPHL BIC | 14 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 40 |
| CLAASSENI SABULO | 8 |
| SKWALA PARALLELA | 2 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 28 |
| HYDROPSYCHE OCCI | 192 |
| SYMPHITOPS COCKE | 12 |
| HYDROPTILA SP. | 20 |
| OREODYTES SCITIL | 14 |
| OPTIOSERVUS SPP. | 12 |
| MICROPSECTR SP.A | 12 |
| PARATANYTARSUS | 2 |
| PHAENOPSECTRA SP | 16 |
| POLYPEDILUM SP.A | 44 |
| TANYTARSUS SP. B | 2 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA B | 6 |
| EUKIEFFERIELLA E | 34 |
| EUKIEFFERIELLA H | 2 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS NIG | 8 |
| ORTHOCLADIUS OBU | [illegible] |
| SYNORTHOCLADIUS | 4 |
| SIMULIUM SP. | 24 |
| HEXATOMA SP. | 2 |

Table 16. Continued

| 15C-7H | |
|---|---|
| BAETIS INSIGNIFI | 318 |
| BAETIS TRICAUDAT | 46 |
| ATTENELLA MARGAR | 54 |
| EPHEMERELLA INFR | 10 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 102 |
| RHITHROGENA HAGE | 2 |
| TRICORYTHODES MI | 24 |
| ISOGENOIDES ELON | 2 |
| CHEUMATOPSYCHE | 14 |
| HYDROPSYCHE OCCI | 96 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 12 |
| OECETIS SP. A | 4 |
| OREODYTES SCITIL | 4 |
| ZAITZEVIA PARVUL | 2 |
| MICROPSECTR SP.A | 12 |
| MICROTENDIPES SP | 10 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 62 |
| ROBACKIA SP. | 2 |
| TANYTARSUS SP. B | 2 |
| CORYNONEURA SP. | 2 |
| EUKIEFFERIELLA E | 14 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 32 |
| SYNORTHOCLADIUS | 4 |
| ABLABESMYIA SP. | 4 |
| SIMULIUM SP. | 6 |
| OLIGOCHAETA | 4 |

| 15D-7H | |
|---|---|
| BAETIS INSIGNIFI | 230 |
| BAETIS TRICAUDAT | 54 |
| CENTROPTILU SP.A | 14 |
| ATTENELLA MARGAR | 52 |
| EPHEMERELLA INFR | 2 |
| NIXE SIMPLICIOID | 238 |
| PARALEPTOPHL BIC | 18 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 68 |
| ISOGENOIDES ELON | 2 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 2 |
| HYDROPSYCHE OCCI | 34 |
| HYDROPTILA SP. | 4 |
| OREODYTES SCITIL | 14 |
| OPTIOSERVUS SPP. | 2 |
| MICROPSECTR SP.A | 2 |
| MICROPSECTR SP.C | 2 |
| MICROTENDIPES SP | 4 |
| PHAENOPSECTRA SP | 34 |
| POLYPEDILUM SP.A | 10 |
| POLYPEDILUM SP.C | 4 |
| ORTHOCLADIUS OBU | 8 |
| SIMULIUM SP. | 2 |
| HEXATOMA SP. | 2 |

| 19A-7 | |
|---|---|
| BAETIS INSIGNIFI | 118 |
| BAETIS TRICAUDAT | 9 |
| CENTROPTILU SP.A | 10 |
| ATTENELLA MARGAR | 97 |
| DRUNELLA GRANDIS | 3 |
| EPHEMERELLA INFR | 1 |
| SERRATELLA TIBIA | 3 |
| NIXE CRIDDLEI | 5 |
| NIXE SIMPLICIOID | 75 |
| PARALEPTOPHL BIC | 7 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 7 |
| HESPEROPERLA PAC | 1 |
| ISOGENOIDES ELON | 11 |
| ISOPERLA QUINQUE | 1 |
| SKWALA PARALLELA | 2 |
| BRACHYCENTRUS OC | 1 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 222 |
| HYDROPSYCHE OCCI | 89 |
| SYMPHITOPS COCKE | 105 |
| HYDROPTILA SP. | 59 |
| PSYCHOMYIA FLAVI | 53 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 3 |
| ZAITZEVIA PARVUL | 3 |
| BRYCHIUS SP. | 1 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.A | 31 |
| MICROTENDIPES SP | 60 |
| POLYPEDILUM SP.A | 18 |
| TANYTARSUS SP. A | 3 |
| XENOCHIRONOMUS | 3 |
| PAGASTIA SP. | 2 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 9 |
| ORTHOCLADIUS B | 14 |
| ORTHOCLADIUS C | 2 |
| ORTHOCLADIUS OBU | 3 |
| SYNORTHOCLADIUS | 2 |
| ANTOCHA SP. | 5 |
| OLIGOCHAETA | 1 |

| 19B-7 | |
|---|---|
| BAETIS INSIGNIFI | 76 |
| BAETIS TRICAUDAT | 1 |
| CENTROPTILU SP.A | 135 |
| M.K. CENTROPTILU ~~ANTROPTILUM~~ SP.B | 41 |
| ATTENELLA MARGAR | 63 |
| DRUNELLA GRANDIS | 2 |
| EPHEMERELLA INFR | 1 |
| SERRATELLA TIBIA | 2 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 39 |
| PARALEPTOPHL BIC | 2 |
| PARALEPTOPHL DEB | 14 |
| TRICORYTHODES MI | 37 |
| ISOGENOIDES ELON | 10 |
| SKWALA PARALLELA | 3 |
| SIGARA SP. | 6 |
| GLOSSOSOMA SP. | 1 |
| CHEUMATOPSYCHE | 190 |
| HYDROPSYCHE OCCI | 147 |
| SYMPHITOPS COCKE | 58 |
| HYDROPTILA SP. | 43 |
| OECETIS SP. A | 3 |
| PSYCHOMYIA FLAVI | 13 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 3 |
| ZAITZEVIA PARVUL | 2 |
| CRYPTOCHIRONOMUS | 2 |
| MICROPSECTR SP.A | 19 |
| MICROTENDIPES SP | 88 |
| POLYPEDILUM SP.A | 20 |
| TANYTARSUS SP. A | 2 |
| PAGASTIA SP. | 1 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS C | 1 |
| ORTHOCLADIUS NIG | 3 |
| ORTHOCLADIUS OBU | 1 |
| ABLABESMYIA SP. | 2 |
| ANTOCHA SP. | 1 |

Table 16. Continued

| 19C-7 | |
|---|---|
| BAETIS INSIGNIFI | 34 |
| BAETIS TRICAUDAT | 5 |
| CENTROPTILU SP.A | 10 |
| ATTENELLA MARGAR | 81 |
| EPHEMERELLA INFR | 1 |
| EPEORUS ALBERTAE | 1 |
| NIXE CRIDDLEI | 3 |
| NIXE SIMPLICIOID | 39 |
| PARALEPTOPHL DEB | 1 |
| TRICORYTHODES MI | 15 |
| ISOGENOIDES ELON | 10 |
| SKWALA PARALLELA | 1 |
| OPTIOSERVUS SPP. | 3 |
| ZAITZEVIA PARVUL | 3 |
| CLADOTANYTA SP.A | 1 |
| CRYPTOCHIRONOMUS | 4 |
| MICROPSECTR SP.A | 7 |
| MICROTENDIPES SP | 125 |
| POLYPEDILUM SP.A | 7 |
| TANYTARSUS SP. A | 5 |
| PAGASTIA SP. | 1 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS C | 2 |
| ORTHOCLADIUS OBU | 4 |
| SYNORTHOCLADIUS | 1 |
| ABLABESMYIA SP. | 1 |

| 19D-7 | |
|---|---|
| BAETIS INSIGNIFI | 77 |
| BAETIS TRICAUDAT | 3 |
| CENTROPTILU SP.A | 14 |
| M.K. CENTROPTILUM ~~ANTROPTILUM~~ SP.B | 2 |
| ATTENELLA MARGAR | 73 |
| DRUNELLA GRANDIS | 1 |
| SERRATELLA TIBIA | 7 |
| EPEORUS ALBERTAE | 3 |
| NIXE CRIDDLEI | 1 |
| NIXE SIMPLICIOID | 65 |
| PARALEPTOPHL BIC | 3 |
| PARALEPTOPHL DEB | 12 |
| PARATEPLOPHLEBIA | 1 |
| TRICORYTHODES MI | 20 |
| CLAASSENI SABULO | 1 |
| ISOGENOIDES ELON | 11 |
| SKWALA PARALLELA | 1 |
| ARCTOPSYCHE GRAN | 3 |
| CHEUMATOPSYCHE | 159 |
| HYDROPSYCHE OCCI | 59 |
| SYMPHITOPS COCKE | 71 |
| HYDROPTILA SP. | 102 |
| NEOTRICHIA SP. | 1 |
| OECETIS SP. A | 3 |
| PSYCHOMYIA FLAVI | 33 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 3 |
| ZAITZEVIA PARVUL | 2 |
| LENZIELLA SP. | 1 |
| MICROPSECTR SP.A | 21 |
| MICROTENDIPES SP | 80 |
| POLYPEDILUM SP.A | 16 |
| PAGASTIA SP. | 1 |
| CORYNONEURA SP. | 1 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 7 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS NIG | 2 |
| ORTHOCLADIUS OBU | 3 |
| SYNORTHOCLADIUS | 1 |
| ABLABESMYIA SP. | 1 |
| ANTOCHA SP. | 1 |

Table 16. Continued

| 21A-8 | |
|---|---|
| BAETIS HAGENI | 3 |
| BAETIS INSIGNIFI | 32 |
| BAETIS TRICAUDAT | 8 |
| CENTROPTILU SP.A | 5 |
| M.K. CENTROPTILU ~~ANTROPTILUM~~ SP.B | 4 |
| ATTENELLA MARGAR | 111 |
| DRUNELLA GRANDIS | 2 |
| EPHEMERELLA INFR | 8 |
| SERRATELLA TIBIA | 18 |
| TIMPANOGA HECUBA | 10 |
| EPEORUS ALBERTAE | 17 |
| HEPTAGENIA SOLIT | 6 |
| NIXE CRIDDLEI | 1 |
| NIXE SIMPLICIOID | 13 |
| PARALEPTOPHL BIC | 13 |
| PARALEPTOPHL DEB | 10 |
| TRICORYTHODES MI | 73 |
| CLAASSENI SABULO | 1 |
| ISOGENOIDES ELON | 7 |
| SKWALA PARALLELA | 1 |
| PTERONARCYS CALI | 2 |
| BRACHYCENTRUS OC | 10 |
| ARCTOPSYCHE GRAN | 13 |
| CHEUMATOPSYCHE | 142 |
| HYDROPSYCHE OCCI | 19 |
| SYMPHITOPS COCKE | 35 |
| SYMPHITOPS SLOSS | 6 |
| HYDROPTILA SP. | 42 |
| NEOTRICHIA SP. | 2 |
| CERACLEA SP. | 2 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 9 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 5 |
| ZAITZEVIA PARVUL | 2 |
| CRYPTOCHIRONOMUS | 2 |
| MICROPSECTR SP.A | 6 |
| MICROTENDIPES SP | 96 |
| POLYPEDILUM SP.A | 17 |
| POLYPEDILUM SP.C | 1 |
| TANYTARSUS SP. B | 5 |
| PAGASTIA SP. | 3 |
| EUKIEFFERIELLA E | 20 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS OBU | 14 |
| SYNORTHOCLADIUS | 1 |
| ABLABESMYIA SP. | 5 |
| SIMULIUM SP. | 1 |
| OLIGOCHAETA LUMB | 5 |
| HIRUDINEA | 1 |

| 21B-8 | |
|---|---|
| BAETIS HAGENI | 3 |
| BAETIS INSIGNIFI | 27 |
| BAETIS TRICAUDAT | 31 |
| CENTROPTILU SP.A | 1 |
| M.K. CENTROPTILU ~~ANTROPTILUM~~ SP.B | 2 |
| ATTENELLA MARGAR | 72 |
| DRUNELLA GRANDIS | 2 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 38 |
| TIMPANOGA HECUBA | 13 |
| EPEORUS ALBERTAE | 31 |
| HEPTAGENIA SOLIT | 5 |
| NIXE SIMPLICIOID | 14 |
| PARALEPTOPHL BIC | 2 |
| PARALEPTOPHL DEB | 6 |
| TRICORYTHODES MI | 14 |
| CLAASSENI SABULO | 8 |
| ISOGENOIDES ELON | 10 |
| SKWALA PARALLELA | 1 |
| RHAGOVELIA SP. | 1 |
| BRACHYCENTRUS OC | 7 |
| ARCTOPSYCHE GRAN | 37 |
| CHEUMATOPSYCHE | 205 |
| HYDROPSYCHE OCCI | 37 |
| SYMPHITOPS COCKE | 66 |
| SYMPHITOPS SLOSS | 6 |
| HYDROPTILA SP. | 32 |
| CERACLEA SP. | 1 |
| OECETIS SP. A | 7 |
| PSYCHOMYIA FLAVI | 8 |
| OPTIOSERVUS SPP. | 7 |
| ZAITZEVIA PARVUL | 4 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.A | 11 |
| MICROTENDIPES SP | 81 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 12 |
| TANYTARSUS SP. B | 2 |
| PAGASTIA SP. | 4 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS B | 14 |
| ORTHOCLADIUS OBU | 3 |
| SYNORTHOCLADIUS | 1 |
| ABLABESMYIA SP. | 1 |
| OLIGOCHAETA | 1 |
| OLIGOCHAETA LUMB | 3 |

Table 16. Continued

| 21C-8 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 10 |
| BAETIS TRICAUDAT | 1 |
| CENTROPTILU SP.A | 1 |
| M.K. CENTROPTILU ~~ANTROPTILUM~~ SP.B | 7 |
| ATTENELLA MARGAR | 101 |
| DRUNELLA GRANDIS | 1 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 13 |
| TIMPANOGA HECUBA | 15 |
| EPEORUS ALBERTAE | 20 |
| HEPTAGENIA SOLIT | 11 |
| NIXE SIMPLICIOID | 43 |
| PARALEPTOPHL BIC | 15 |
| PARALEPTOPHL DEB | 6 |
| TRICORYTHODES MI | 47 |
| CLAASSENI SABULO | 2 |
| ISOGENOIDES ELON | 14 |
| PTERONARCYS CALI | 3 |
| BRACHYCENTRUS OC | 6 |
| ARCTOPSYCHE GRAN | 17 |
| CHEUMATOPSYCHE | 119 |
| HYDROPSYCHE OCCI | 11 |
| SYMPHITOPS COCKE | 53 |
| SYMPHITOPS SLOSS | 3 |
| HYDROPTILA SP. | 51 |
| OECETIS SP. A | 6 |
| DICOSMOECUS SP. | 1 |
| PSYCHOMYIA FLAVI | 20 |
| OREODYTES SCITIL | 1 |
| OPTIOSERVUS SPP. | 1 |
| ZAITZEVIA PARVUL | 3 |
| MICROPSECTR SP.A | 1 |
| MICROTENDIPES SP | 125 |
| PHAENOPSECTRA SP | 7 |
| POLYPEDILUM SP.A | 10 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS OBU | 1 |
| SYNORTHOCLADIUS | 3 |
| OLIGOCHAETA | 4 |
| OLIGOCHAETA LUMB | 3 |

| 21D-8 | |
|---|---|
| BAETIS INSIGNIFI | 10 |
| BAETIS TRICAUDAT | 4 |
| CENTROPTILU SP.A | 1 |
| CENTROPTILU ~~ANTROPTILUM~~ SP.B | 8 |
| ATTENELLA MARGAR | 33 |
| DRUNELLA GRANDIS | 2 |
| EPHEMERELLA INFR | 1 |
| SERRATELLA TIBIA | 14 |
| TIMPANOGA HECUBA | 6 |
| EPEORUS ALBERTAE | 15 |
| HEPTAGENIA SOLIT | 8 |
| NIXE SIMPLICIOID | 32 |
| PARALEPTOPHL BIC | 15 |
| PARALEPTOPHL DEB | 7 |
| TRICORYTHODES MI | 30 |
| ISOGENOIDES ELON | 18 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 13 |
| CHEUMATOPSYCHE | 85 |
| HYDROPSYCHE OCCI | 10 |
| SYMPHITOPS COCKE | 55 |
| SYMPHITOPS SLOSS | 5 |
| HYDROPTILA SP. | 49 |
| NEOTRICHIA SP. | 2 |
| CERACLEA SP. | 2 |
| OECETIS SP. A | 5 |
| PSYCHOMYIA FLAVI | 22 |
| OPTIOSERVUS SPP. | 3 |
| CRYPTOCHIRONOMUS | 2 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 89 |
| PHAENOPSECTRA SP | 7 |
| POLYPEDILUM SP.A | 12 |
| TANYTARSUS SP. B | 2 |
| PAGASTIA SP. | 1 |
| EUKIEFFERIELLA E | 10 |
| ORTHOCLADIUS B | 9 |
| ORTHOCLADIUS OBU | 2 |
| PSECTROCLADIUS B | 2 |
| OLIGOCHAETA | 1 |
| OLIGOCHAETA LUMB | 4 |

| 23-1/8 | |
|---|---|
| NIXE CRIDDLEI | 1 |
| NIXE SIMPLICIOID | 1 |
| PARALEPTOPHL BIC | 1 |
| TRICORYTHODES MI | 1 |
| OPHIOGOMPHUS SP. | 1 |
| CHEUMATOPSYCHE | 1 |
| MICROTENDIPES SP | 6 |
| XENOCHIRONOMUS | 1 |
| HYALELLA AZTECA | 11 |
| GYRAULUS SP. | 14 |
| LYMNAEA SP. | 3 |
| PHYSA SP. | 25 |
| OLIGOCHAETA LUMB | 1 |

| 23-2/8 | |
|---|---|
| ATTENELLA MARGAR | 3 |
| NIXE CRIDDLEI | 1 |
| NIXE SIMPLICIOID | 5 |
| STENONEMA SP. | 3 |
| PARALEPTOPHL BIC | 2 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 1 |
| OPHIOGOMPHUS SP. | 4 |
| DICOSMOECUS SP. | 1 |
| DUBIRAPHIA SP. | 2 |
| MICROTENDIPES SP | 17 |
| PARACHIRONOMUS | 1 |
| HYALELLA AZTECA | 5 |
| GYRAULUS SP. | 7 |
| LYMNAEA SP. | 2 |
| PHYSA SP. | 14 |
| OLIGOCHAETA LUMB | 1 |
| DINA SP. | 1 |

| 23-3/8 | |
|---|---|
| BAETIS TRICAUDAT | 1 |
| CENTROPTILUM SP. | 1 |
| CAENIS SIMULANS | 1 |
| ATTENELLA MARGAR | 7 |
| HEXAGENIA LIMBAT | 1 |
| NIXE SIMPLICIOID | 15 |
| STENONEMA SP. | 5 |
| PARALEPTOPHL BIC | 9 |
| PARALEPTOPHL DEB | 1 |
| TRICORYTHODES MI | 1 |
| AESHNA SP. | 1 |
| DUBIRAPHIA SP. | 3 |
| DICROTENDIP SP.B | 2 |
| MICROTENDIPES SP | 17 |
| PARACHIRONOMUS | 4 |
| POLYPEDILUM SP.A | 1 |
| ORTHOCLADIUS B | 2 |
| ABLABESMYIA SP. | 4 |
| HYALELLA AZTECA | 13 |
| GYRAULUS SP. | 10 |
| LYMNAEA SP. | 2 |
| PHYSA SP. | 23 |
| OLIGOCHAETA | 1 |
| DINA SP. | 2 |

| 23-4/8 | |
|---|---|
| ATTENELLA MARGAR | 1 |
| NIXE SIMPLICIOID | 4 |
| STENONEMA SP. | 2 |
| PARALEPTOPHL BIC | 1 |
| PARALEPTOPHL DEB | 3 |
| AESHNA SP. | 1 |
| CHEUMATOPSYCHE | 1 |
| HYDROPTILA SP. | 1 |
| LEPIDOSTOMA SP.A | 1 |
| CERACLEA SP. | 1 |
| DICOSMOECUS SP. | 1 |
| PARARGYRACTIS SP | 1 |
| OREODYTES SCITIL | 1 |
| DUBIRAPHIA SP. | 4 |
| PALPOMY-GP SP. B | 1 |
| MICROTENDIPES SP | 30 |
| PAGASTIA SP. | 4 |
| HYALELLA AZTECA | 13 |
| GYRAULUS SP. | 16 |
| PHYSA SP. | 45 |
| OLIGOCHAETA LUMB | 3 |
| DINA SP. | 1 |

24-1/8

| | |
|---|---|
| BAETIS INSIGNIFI | 1 |
| ATTENELLA MARGAR | 7 |
| TIMPANOGA HECUBA | 1 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 8 |
| STENONEMA SP. | 3 |
| PARALEPTOPHL BIC | 2 |
| TRICORYTHODES MI | 4 |
| PTERONARCYS CALI | 1 |
| CHEUMATOPSYCHE | 38 |
| SYMPHITOPS COCKE | 12 |
| HYDROPTILA SP. | 5 |
| OREODYTES SCITIL | 1 |
| ZAITZEVIA PARVUL | 3 |
| CHIRONOMUS SP. | 1 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 83 |
| POLYPEDILUM SP.A | 5 |
| EUKIEFFERIELLA E | 1 |
| ORTHOCLADIUS B | 5 |
| ORTHOCLADIUS OBU | 17 |
| ABLABESMYIA SP. | 1 |
| SIMULIUM SP. | 1 |

24-2/8

| | |
|---|---|
| CENTROPTILUM SP. | 1 |
| ATTENELLA MARGAR | 8 |
| HEPTAGENIA SOLIT | 1 |
| NIXE SIMPLICIOID | 31 |
| STENONEMA SP. | 1 |
| PARALEPTOPHL BIC | 17 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 15 |
| CHEUMATOPSYCHE | 21 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 1 |
| OREODYTES SCITIL | 5 |
| ZAITZEVIA PARVUL | 5 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.A | 5 |
| MICROTENDIPES SP | 117 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.A | 2 |
| SYMPOTTHASTIA SP | 1 |
| EUKIEFFERIELLA E | 1 |
| ORTHOCLADIUS B | 14 |
| ORTHOCLADIUS OBU | 17 |
| SYNORTHOCLADIUS | 1 |
| PROCLADIUS SP. A | 1 |

24-3/8

| | |
|---|---|
| CENTROPTILUM SP. | 1 |
| ATTENELLA MARGAR | 4 |
| NIXE SIMPLICIOID | 12 |
| STENONEMA SP. | 4 |
| TRICORYTHODES MI | 9 |
| ISOGENOIDES ELON | 1 |
| ARCTOPSYCHE GRAN | 1 |
| CHEUMATOPSYCHE | 26 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 19 |
| HYDROPTILA SP. | 1 |
| OREODYTES SCITIL | 1 |
| ZAITZEVIA PARVUL | 3 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.A | 1 |
| MICROTENDIPES SP | 51 |
| POLYPEDILUM SP.A | 1 |
| ORTHOCLADIUS B | 7 |
| ORTHOCLADIUS OBU | 4 |
| HYALELLA AZTECA | 1 |
| OLIGOCHAETA LUMB | 1 |

24-4/8

| | |
|---|---|
| BAETIS INSIGNIFI | 2 |
| BAETIS TRICAUDAT | 2 |
| CENTROPTILUM SP. | 1 |
| ATTENELLA MARGAR | 6 |
| EPEORUS ALBERTAE | 1 |
| HEPTAGENIA SOLIT | 2 |
| NIXE SIMPLICIOID | 13 |
| STENONEMA SP. | 5 |
| TRICORYTHODES MI | 7 |
| OPHIOGOMPHUS SP. | 1 |
| CHEUMATOPSYCHE | 51 |
| SYMPHITOPS COCKE | 16 |
| HYDROPTILA SP. | 5 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 75 |
| POLYPEDILUM SP.A | 1 |
| EUKIEFFERIELLA E | 3 |
| ORTHOCLADIUS B | 7 |
| ORTHOCLADIUS OBU | 4 |
| ABLABESMYIA SP. | 1 |
| OLIGOCHAETA LUMB | 1 |

| 25-1/8 | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| CENTROPTILUM SP. | 1 |
| ATTENELLA MARGAR | 27 |
| SERRATELLA TIBIA | 2 |
| TIMPANOGA HECUBA | 1 |
| EPEORUS ALBERTAE | 3 |
| HEPTAGENIA SOLIT | 1 |
| NIXE SIMPLICIOID | 24 |
| STENONEMA SP. | 2 |
| TRICORYTHODES MI | 10 |
| OPHIOGOMPHUS SP. | 2 |
| SIGARA SP. | 1 |
| CHEUMATOPSYCHE | 90 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 7 |
| HYDROPTILA SP. | 1 |
| OECETIS SP. A | 2 |
| PSYCHOMYIA FLAVI | 1 |
| OREODYTES SCITIL | 2 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 12 |
| POLYPEDILUM SP.A | 1 |
| XENOCHIRONOMUS | 1 |
| CARDIOCLADIUS SP | 1 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS OBU | 5 |
| ABLABESMYIA SP. | 2 |
| HYALELLA AZTECA | 1 |
| LYMNAEA SP. | 3 |
| OLIGOCHAETA LUMB | 6 |

| 25-2/8 | |
|---|---|
| BAETIS INSIGNIFI | 1 |
| BAETIS TRICAUDAT | 1 |
| CENTROPTILUM SP. | 2 |
| ATTENELLA MARGAR | 26 |
| SERRATELLA TIBIA | 1 |
| TIMPANOGA HECUBA | 2 |
| HEPTAGENIA SOLIT | 1 |
| NIXE SIMPLICIOID | 13 |
| STENONEMA SP. | 2 |
| TRICORYTHODES MI | 14 |
| CLAASSENI SABULO | 1 |
| ISOGENOIDES ELON | 1 |
| OPHIOGOMPHUS SP. | 1 |
| CHEUMATOPSYCHE | 124 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 10 |
| HYDROPTILA SP. | 4 |
| DICOSMOECUS SP. | 2 |
| OREODYTES SCITIL | 3 |
| ZAITZEVIA PARVUL | 6 |
| CRYPTOCHIRONOMUS | 2 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 10 |
| POLYPEDILUM SP.A | 3 |
| CARDIOCLADIUS SP | 1 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS OBU | 4 |
| HEXATOMA SP. | 1 |
| LYMNAEA SP. | 5 |
| OLIGOCHAETA LUMB | 10 |

| 25-3/8 | |
|---|---|
| BAETIS INSIGNIFI | 1 |
| BAETIS TRICAUDAT | 1 |
| ATTENELLA MARGAR | 30 |
| TIMPANOGA HECUBA | 4 |
| EPEORUS ALBERTAE | 1 |
| NIXE SIMPLICIOID | 13 |
| STENONEMA SP. | 1 |
| TRICORYTHODES MI | 20 |
| OPHIOGOMPHUS SP. | 2 |
| GLOSSOSOMA SP. | 2 |
| CHEUMATOPSYCHE | 19 |
| SYMPHITOPS COCKE | 1 |
| HYDROPTILA SP. | 3 |
| PSYCHOMYIA FLAVI | 3 |
| PARARGYRACTIS SP | 1 |
| OREODYTES SCITIL | 2 |
| ZAITZEVIA PARVUL | 2 |
| CRYPTOCHIRONOMUS | 5 |
| MICROPSECTR SP.A | 9 |
| MICROTENDIPES SP | 14 |
| ORTHOCLADIUS B | 3 |
| ORTHOCLADIUS OBU | 7 |
| SYNORTHOCLADIUS | 1 |
| ABLABESMYIA SP. | 7 |
| OLIGOCHAETA LUMB | 1 |

| 25-4/8 | |
|---|---|
| CENTROPTILUM SP. | 5 |
| ATTENELLA MARGAR | 29 |
| TIMPANOGA HECUBA | 5 |
| EPEORUS ALBERTAE | 1 |
| HEPTAGENIA SOLIT | 1 |
| NIXE SIMPLICIOID | 32 |
| STENONEMA SP. | 6 |
| TRICORYTHODES MI | 46 |
| OPHIOGOMPHUS SP. | 3 |
| CHEUMATOPSYCHE | 50 |
| PSYCHOMYIA FLAVI | 1 |
| OREODYTES SCITIL | 3 |
| ZAITZEVIA PARVUL | 1 |
| CRYPTOCHIRONOMUS | 7 |
| MICROTENDIPES SP | 20 |
| POLYPEDILUM SP.A | 1 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 3 |
| ABLABESMYIA SP. | 4 |
| SIMULIUM SP. | 1 |
| LYMNAEA SP. | 2 |
| OLIGOCHAETA LUMB | 4 |

Table 16. Continued

| | |
|---|---|
| 27-1/8 | |
| CENTROPTILUM SP. | 5 |
| STENONEMA SP. | 1 |
| TRICORYTHODES MI | 2 |
| PARARGYRACTIS SP | 1 |
| DUBIRAPHIA SP. | 1 |
| MICROTENDIPES SP | 2 |
| PARACHIRONOMUS | 1 |
| OLIGOCHAETA LUMB | 8 |
| 27-2/8 | |
| CENTROPTILUM SP. | 3 |
| HEPTAGENIA SOLIT | 1 |
| OPTIOSERVUS SPP. | 1 |
| OLIGOCHAETA LUMB | 36 |
| 27-3/8 | |
| BAETIS TRICAUDAT | 1 |
| CENTROPTILUM SP. | 4 |
| ATTENELLA MARGAR | 1 |
| NIXE SIMPLICIOID | 1 |
| OLIGOCHAETA | 1 |
| OLIGOCHAETA LUMB | 17 |
| 27-4/8 | |
| CENTROPTILUM SP. | 1 |
| PARACHIRONOMUS | 1 |
| HYALELLA AZTECA | 1 |
| OLIGOCHAETA LUMB | 3 |
| 31-1/8 | |
| OLIGOCHAETA LUMB | 10 |
| 31-2/8 | |
| OLIGOCHAETA LUMB | 15 |
| 31-3/8 | |
| OLIGOCHAETA LUMB | 4 |
| 31-4/8 | |
| HELOPHORUS SP. | 1 |
| OLIGOCHAETA LUMB | 4 |

Table 16. Deep Water Monitoring Stations - Petite Ponar Grab Samples

| | |
|---|---|
| 03-2/7 | |
| CRICOTOPUS SP. E | 1 |
| | |
| 13/7 | |
| BAETIS TRICAUDAT | 1 |
| CENTROPTILUM SP. | 2 |
| NIXE SIMPLICIOID | 1 |
| RHITHROGENA HAGE | 1 |
| TRICORYTHODES MI | 15 |
| HYDROPTILA SP. | 3 |
| OPTIOSERVUS SPP. | 1 |
| CHIRONOMUS SP. | 2 |
| CRYPTOCHIRONOMUS | 3 |
| MICROTENDIPES SP | 24 |
| PARACLADOPE SP.C | 1 |
| PARATANYTARSUS | 4 |
| PHAENOPSECTRA SP | 87 |
| RHEOTANYTARSUS | 2 |
| ORTHOCLADIUS OBU | 1 |
| OLIGOCHAETA | 6 |
| | |
| 15/7 | |
| NIXE SIMPLICIOID | 4 |
| PARALEPTOPHL DEB | 1 |
| TRICORYTHODES MI | 3 |
| CHEUMATOPSYCHE | 1 |
| MICROTENDIPES SP | 18 |
| PHAENOPSECTRA SP | 16 |
| RHEOTANYTARSUS | 1 |
| ORTHOCLADIUS OBU | 1 |
| PSECTROCLADIUS B | 3 |
| OLIGOCHAETA | 39 |
| | |
| 16/7 | |
| BAETIS INSIGNIFI | 1 |
| CENTROPTILUM SP. | 1 |
| NIXE SIMPLICIOID | 4 |
| RHITHROGENA HAGE | 1 |
| PARALEPTOPHL DEB | 1 |
| TRICORYTHODES MI | 1 |
| HYDROPTILA SP. | 5 |
| PSYCHOMYIA FLAVI | 1 |
| CRYPTOCHIRONOMUS | 3 |
| MICROTENDIPES SP | 4 |
| PARACLADOPE SP.B | 1 |
| PARACLADOPE SP.C | 3 |
| PHAENOPSECTRA SP | 19 |
| ROBACKIA SP. | 1 |
| RHEOTANYTARSUS | 3 |
| CORYNONEURA SP. | 1 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 3 |
| PSECTROCLADIUS B | 1 |
| SYNORTHOCLADIUS | 5 |
| OLIGOCHAETA | 41 |
| | |
| 17/7 | |
| BAETIS TRICAUDAT | 1 |
| NIXE SIMPLICIOID | 4 |
| RHITHROGENA HAGE | 1 |
| HYDROPSYCHE SP.B | 1 |
| SYMPHITOPS SP. A | 1 |
| RHEOTANYTARSUS | 1 |
| CARDIOCLADIUS SP | 1 |
| | |
| 18/7 | |
| BAETIS INSIGNIFI | 1 |
| NIXE SIMPLICIOID | 1 |
| TRICORYTHODES MI | 2 |
| MICROTENDIPES SP | 5 |
| PSECTROCLADIUS B | 1 |
| OLIGOCHAETA | 1 |
| | |
| 20/7 | |
| CENTROPTILUM SP. | 1 |
| NIXE SIMPLICIOID | 1 |
| MICROTENDIPES SP | 11 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.A | 1 |
| MONODIAMESA SP. | 2 |
| ODONTOMESA SP. | 1 |
| OLIGOCHAETA | 10 |
| | |
| 20.5/7 | |
| NIXE SIMPLICIOID | 1 |
| PARACLADOPE SP.B | 2 |
| PHAENOPSECTRA SP | 3 |
| POLYPEDILUM SP.A | 1 |
| MONODIAMESA SP. | 8 |
| ODONTOMESA SP. | 1 |
| EUKIEFFERIELLA F | 4 |
| OLIGOCHAETA | 62 |

21--1/7

| | |
|---|---|
| NIXE SIMPLICIOID | 1 |
| CRYPTOCHIRONOMUS | 1 |
| MICROTENDIPES SP | 5 |
| PARACLADOPE SP.B | 1 |
| POLYPEDILUM SP.A | 5 |
| OLIGOCHAETA | 6 |

21-2/7

| | |
|---|---|
| MICROTENDIPES SP | 8 |
| PARACLADOPE SP.B | 3 |
| POLYPEDILUM SP.A | 5 |
| RHEOTANYTARSUS | 1 |
| CORYNONEURA SP. | 2 |

21--3/7

| | |
|---|---|
| CRYPTOCHIRONOMUS | 1 |
| MICROTENDIPES SP | 6 |
| PARACLADOPE SP.B | 2 |
| POLYPEDILUM SP.A | 1 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 1 |
| PSECTROCLADIUS B | 2 |
| SYNORTHOCLADIUS | 1 |
| OLIGOCHAETA | 6 |

21.5/7

| | |
|---|---|
| NIXE SIMPLICIOID | 1 |
| TRICORYTHODES MI | 1 |
| CRYPTOCHIRONOMUS | 2 |
| MICROTENDIPES SP | 7 |
| POLYPEDILUM SP.A | 1 |
| RHEOTANYTARSUS | 1 |
| OLIGOCHAETA | 28 |

22/7

| | |
|---|---|
| CENTROPTILUM SP. | 1 |
| ATTENELLA MARGAR | 1 |
| NIXE SIMPLICIOID | 2 |
| NEOTRICHIA SP. | 2 |
| RHEOTANYTARSUS | 7 |

26-1/7

| | |
|---|---|
| CHIRONOMUS SP. | 9 |
| CRYPTOTENDIPE SP | 2 |
| MICROPSECTR SP.B | 1 |
| PARALAUTERBORNIE | 50 |
| PARATANYTARSUS | 1 |
| PHAENOPSECTRA SP | 22 |
| POLYPEDILUM SP.C | 154 |
| STEMPELLINELLA | 2 |
| TANYTARSUS SP. | 2 |
| MONODIAMESA SP. | 3 |
| PSECTROCLADIUS A | 1 |
| PROCLADIUS SP. A | 5 |
| OLIGOCHAETA | 320 |

26-2/7

| | |
|---|---|
| EPEORUS ALBERTAE | 1 |
| SYMPHITOPS COCKE | 1 |
| OPTIOSERVUS SPP. | 1 |
| CHIRONOMUS SP. | 10 |
| CRYPTOCHIRONOMUS | 1 |
| CRYPTOTENDIPE SP | 11 |
| PARALAUTERBORNIE | 56 |
| PHAENOPSECTRA SP | 48 |
| POLYPEDILUM SP.C | 256 |
| STEMPELLINELLA | 1 |
| TANYTARSUS SP. | 6 |
| MONODIAMESA SP. | 2 |
| ORTHOCLADIUS OBU | 1 |
| PROCLADIUS SP. A | 15 |
| OLIGOCHAETA | 360 |

26-3/7

| | |
|---|---|
| CHIRONOMUS SP. | 4 |
| CRYPTOTENDIPE SP | 1 |
| PARALAUTERBORNIE | 10 |
| PHAENOPSECTRA SP | 17 |
| POLYPEDILUM SP.C | 35 |
| STEMPELLINELLA | 1 |
| TANYTARSUS SP. | 1 |
| PROCLADIUS SP. A | 5 |
| OLIGOCHAETA | 38 |

Table 16. Continued

| 28A-1/7 | |
|---|---|
| CHIRONOMUS SP. | 1 |
| PROCLADIUS SP. A | 1 |

| 28A-2/7 | |
|---|---|
| PROCLADIUS SP. A | 9 |
| OLIGOCHAETA | 1 |

| 28A-3/7 | |
|---|---|
| CHIRONOMUS SP. | 3 |
| CRYPTOTENDIPE SP | 1 |
| PROCLADIUS SP. A | 18 |
| OLIGOCHAETA | 93 |

| 28B-1/7 | |
|---|---|
| CHIRONOMUS SP. | 8 |
| CRYPTOTENDIPE SP | 1 |
| HARNISCHIA SP. | 3 |
| TANYTARSUS SP. | 3 |
| PROCLADIUS SP. A | 6 |
| OLIGOCHAETA | 123 |

| 28B-2/7 | |
|---|---|
| CHIRONOMUS SP. | 1 |
| CRYPTOTENDIPE SP | 1 |
| HARNISCHIA SP. | 3 |
| PROCLADIUS SP. A | 6 |
| PROCLADIUS SP. B | 3 |
| OLIGOCHAETA | 18 |

| 28B-3/7 | |
|---|---|
| CHIRONOMUS SP. | 3 |
| HARNISCHIA SP. | 4 |
| PROCLADIUS SP. A | 12 |
| OLIGOCHAETA | 131 |

| 28B-4/7 | |
|---|---|
| PALPOMY-GP SP. A | 1 |
| CHIRONOMUS SP. | 5 |
| HARNISCHIA SP. | 2 |
| TANYTARSUS SP. | 2 |
| PROCLADIUS SP. A | 8 |
| OSTRACODA | 2 |
| UNIONICOLA SP. | 1 |
| OLIGOCHAETA | 57 |

| 30-1/7 | |
|---|---|
| HARNISCHIA SP. | 1 |
| PAGASTIELLA SP. | 2 |
| PARATANYTARSUS | 2 |
| HETEROTRISSOCLAD | 2 |
| CLADOCERA | 1 |
| HYALELLA AZTECA | 1 |
| LYMNAEA SP. | 1 |

| 30-2/7 | |
|---|---|
| PALPOMY-GP SP. A | 1 |
| CLADOTANYTARSUS | 5 |
| CRYPTOTENDIPE SP | 4 |
| HARNISCHIA SP. | 2 |
| LENZIELLA SP. | 2 |
| MICROPSECTR SP.B | 2 |
| PAGASTIELLA SP. | 7 |
| POLYPEDILUM SP.B | 2 |
| STEMPELLINA SP. | 2 |
| PROCLADIUS SP. A | 2 |

| 30-3/7 | |
|---|---|
| CRYPTOTENDIPE SP | 1 |
| OLIGOCHAETA | 1 |

Table 16. Benthic Macroinvertebrate Sample Counts and Identifications
Fall 1984
Shallow Water Stations - Kick Samples

| 01A-11Q | |
|---|---|
| BAETIS INSIGNIFI | 24 |
| BAETIS TRICAUDAT | 76 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 2728 |
| CINYGMULA SP. | 8 |
| RHITHROGENA HAGE | 204 |
| PARALEPTOPHL MEM | 16 |
| AMELETUS VELOX | 16 |
| ALLOPERLA-GROUP | 8 |
| PROSTOIA BESAMET | 16 |
| CULTUS PILATUS | 4 |
| CLAASSENI SABULO | 24 |
| ISOGENOIDES ELON | 16 |
| ISOPERLA FULVA | 124 |
| ISOPERLA QUINQUE | 12 |
| PTERONARCELLA BA | 56 |
| ARCTOPSYCHE GRAN | 40 |
| CHEUMATOPSYCHE | 32 |
| HYDROPSYCHE OCCI | 792 |
| SYMPHITOPS COCKE | 28 |
| SYMPHITOPS SLOSS | 80 |
| LEPIDOSTOMA SP.A | 36 |
| OPTIOSERVUS SPP. | 32 |
| ZAITZEVIA PARVUL | 36 |
| MICROPSECTR SP.A | 4 |
| DIAMESA SP. B | 12 |
| EUKIEFFERIELLA D | 52 |
| ORTHOCLADIUS OBU | 16 |
| HEXATOMA SP. | 24 |

| 01B-11Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| BAETIS TRICAUDAT | 36 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 2144 |
| RHITHROGENA HAGE | 168 |
| PARALEPTOPHL MEM | 16 |
| AMELETUS VELOX | 4 |
| ALLOPERLA-GROUP | 16 |
| PROSTOIA BESAMET | [illegible] |
| ZAPADA CINCTIPES | 24 |
| CLAASSENI SABULO | [illegible] |
| ISOGENOIDES ELON | [illegible] |
| ISOPERLA FULVA | 140 |
| ISOPERLA QUINQUE | 12 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 56 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 8 |
| ARCTOPSYCHE GRAN | 64 |
| CHEUMATOPSYCHE | 36 |
| HYDROPSYCHE OCCI | 1336 |
| SYMPHITOPS COCKE | 28 |
| SYMPHITOPS SLOSS | 80 |
| HYDROPTILA SP. | 12 |
| LEPIDOSTOMA SP.A | 28 |
| OECETIS SP. A | 4 |
| OPTIOSERVUS SPP. | 64 |
| ZAITZEVIA PARVUL | 56 |
| ATHERIX VARIEGAT | 16 |
| DIAMESA SP. B | 4 |
| CRICOTOPUS SP. B | 12 |
| EUKIEFFERIELLA B | 36 |
| EUKIEFFERIELLA E | 12 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS B | 4 |
| SIMULIUM SP. | 40 |
| HEXATOMA SP. | 28 |

Table 16. Continued

| 01C-11Q | |
|---|---|
| BAETIS INSIGNIFI | 36 |
| BAETIS TRICAUDAT | 164 |
| EPHEMERELLA INFR | 4812 |
| EPEORUS ALBERTAE | 12 |
| RHITHROGENA HAGE | 660 |
| PARALEPTOPHL MEM | 36 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 4 |
| ALLOPERLA-GROUP | 16 |
| ZAPADA CINCTIPES | 12 |
| CLAASSENI SABULO | 40 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 24 |
| ISOPERLA FULVA | 144 |
| ISOPERLA QUINQUE | 20 |
| SKWALA PARALLELA | 12 |
| PTERONARCELLA BA | 44 |
| TAENIONEMA PACIF | 16 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 324 |
| SYMPHITOPS COCKE | 8 |
| SYMPHITOPS SLOSS | 80 |
| HYDROPTILA SP. | 24 |
| LEPIDOSTOMA SP.A | 32 |
| OECETIS SP. A | 4 |
| OPTIOSERVUS SPP. | 36 |
| ZAITZEVIA PARVUL | 12 |
| ATHERIX VARIEGAT | 4 |
| MICROTENDIPES SP | 8 |
| CRICOTOPUS SP. B | 44 |
| EUKIEFFERIELLA B | 36 |
| EUKIEFFERIELLA H | 8 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 24 |
| SIMULIUM SP. | 8 |
| HEXATOMA SP. | 24 |

| 01D-11Q | |
|---|---|
| BAETIS INSIGNIFI | 20 |
| BAETIS TRICAUDAT | 88 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 2024 |
| CINYGMULA SP. | 4 |
| EPEORUS ALBERTAE | 4 |
| RHITHROGENA HAGE | 208 |
| PARALEPTOPHL MEM | 8 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 4 |
| ZAPADA CINCTIPES | 8 |
| ISOPERLA FULVA | 92 |
| ISOPERLA QUINQUE | 8 |
| PTERONARCELLA BA | 44 |
| TAENIONEMA PACIF | 8 |
| ARCTOPSYCHE GRAN | 56 |
| CHEUMATOPSYCHE | 60 |
| HYDROPSYCHE OCCI | 1408 |
| SYMPHITOPS COCKE | 40 |
| SYMPHITOPS SLOSS | 116 |
| HYDROPTILA SP. | 12 |
| LEPIDOSTOMA SP.A | 48 |
| CERACLEA SP. | 4 |
| OECETIS SP. A | 4 |
| OPTIOSERVUS SPP. | 16 |
| ZAITZEVIA PARVUL | 40 |
| ATHERIX VARIEGAT | 4 |
| POLYPEDILUM SP.A | 4 |
| CRICOTOPUS SP. B | 8 |
| EUKIEFFERIELLA B | 52 |
| EUKIEFFERIELLA E | 24 |
| EUKIEFFERIELLA H | 12 |
| ORTHOCLADIUS OBU | 8 |
| SIMULIUM SP. | 16 |
| HEXATOMA SP. | 40 |

Table 16. Continued

| 02A-11H | |
|---|---|
| BAETIS INSIGNIFI | 6 |
| BAETIS TRICAUDAT | 18 |
| EPHEMERELLA INFR | 416 |
| EPEORUS ALBERTAE | 2 |
| RHITHROGENA HAGE | 164 |
| PARALEPTOPHL MEM | 80 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 4 |
| ALLOPERLA-GROUP | 30 |
| ZAPADA CINCTIPES | 4 |
| CALINEURIA CALIF | 12 |
| CLAASSENI SABULO | 72 |
| HESPEROPERLA PAC | 4 |
| CULTUS PILATUS | 2 |
| ISOPERLA FULVA | 12 |
| ISOPERLA QUINQUE | 2 |
| SKWALA PARALLELA | 2 |
| PTERONARCYS CALI | 8 |
| CHEUMATOPSYCHE | 54 |
| HYDROPSYCHE OCCI | 42 |
| SYMPHITOPS COCKE | 6 |
| SYMPHITOPS SLOSS | 62 |
| HYDROPTILA SP. | 48 |
| LEUCOTRICHIA PIC | 2 |
| LEPIDOSTOMA SP.A | 12 |
| OECETIS SP. A | 2 |
| PSYCHOMYIA FLAVI | 14 |
| RHYACOPHILA BIFI | 4 |
| PARARGYRACTIS SP | 2 |
| OPTIOSERVUS SPP. | 46 |
| ZAITZEVIA PARVUL | 30 |
| MICROTENDIPES SP | 4 |
| POLYPEDILUM SP.C | 2 |
| RHEOTANYTARSUS | 6 |
| CRICOTOPUS SP. B | 44 |
| EUKIEFFERIELLA B | 6 |
| EUKIEFFERIELLA H | 12 |
| ORTHOCLADIUS B | 10 |
| ORTHOCLADIUS OBU | 14 |
| WIEDEMANNIA SP. | 2 |
| ANTOCHA SP. | 4 |
| HEXATOMA SP. | 18 |
| PHYSA SP. | 4 |
| OLIGOCHAETA LUMB | 2 |
| TURBELLARI | 2 |

| 02B-11H | |
|---|---|
| BAETIS INSIGNIFI | 22 |
| BAETIS TRICAUDAT | 50 |
| DRUNELLA GRANDIS | 2 |
| EPHEMERELLA INFR | 444 |
| EPEORUS ALBERTAE | 2 |
| RHITHROGENA HAGE | 202 |
| PARALEPTOPHL MEM | 18 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 4 |
| ALLOPERLA-GROUP | 22 |
| ZAPADA CINCTIPES | 2 |
| CALINEURIA CALIF | 18 |
| CLAASSENI SABULO | 30 |
| HESPEROPERLA PAC | 4 |
| ISOPERLA FULVA | 16 |
| SKWALA PARALLELA | 8 |
| HELICOPSYCHE BOR | 22 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 94 |
| HYDROPSYCHE OCCI | 12 |
| SYMPHITOPS COCKE | 26 |
| SYMPHITOPS SLOSS | 244 |
| HYDROPTILA SP. | 48 |
| LEPIDOSTOMA SP.A | 6 |
| OECETIS SP. A | 8 |
| APATANIA SP. | 2 |
| PSYCHOMYIA FLAVI | 2 |
| RHYACOPHILA BIFI | 2 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 38 |
| ZAITZEVIA PARVUL | 38 |
| MICROTENDIPES SP | 2 |
| POLYPEDILUM SP.A | 4 |
| RHEOTANYTARSUS | 30 |
| POTTHASTIA SP. | 2 |
| CRICOTOPUS SP. B | 44 |
| EUKIEFFERIELLA B | 2 |
| EUKIEFFERIELLA E | 2 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS B | 14 |
| ORTHOCLADIUS OBU | 12 |
| WIEDEMANNIA SP. | 2 |
| ANTOCHA SP. | 2 |
| HEXATOMA SP. | 26 |
| SPERCHON SP. | 2 |
| PHYSA SP. | 18 |
| OLIGOCHAETA LUMB | 2 |
| TURBELLARI | 4 |

Table 16. Continued

| 02C-11H | |
|---|---|
| BAETIS INSIGNIFI | 24 |
| BAETIS TRICAUDAT | 102 |
| DRUNELLA DODDSI | 2 |
| DRUNELLA GRANDIS | 2 |
| EPHEMERELLA INFR | 560 |
| EPEORUS ALBERTAE | 10 |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 238 |
| PARALEPTOPHL MEM | 36 |
| CAPNIA-GROUP SP. | 4 |
| ALLOPERLA-GROUP | 42 |
| ZAPADA CINCTIPES | 2 |
| CALINEURIA CALIF | 20 |
| CLAASSENI SABULO | 36 |
| HESPEROPERLA PAC | 2 |
| ISOPERLA FULVA | 24 |
| SKWALA PARALLELA | 4 |
| PTERONARCYS CALI | 6 |
| HELICOPSYCHE BOR | 4 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 176 |
| HYDROPSYCHE OCCI | 28 |
| SYMPHITOPS COCKE | 30 |
| SYMPHITOPS SLOSS | 240 |
| HYDROPTILA SP. | 70 |
| LEUCOTRICHIA PIC | 2 |
| LEPIDOSTOMA SP.A | 24 |
| PSYCHOMYIA FLAVI | 14 |
| RHYACOPHILA BIFI | 10 |
| PARARGYRACTIS SP | 2 |
| OPTIOSERVUS SPP. | 42 |
| ZAITZEVIA PARVUL | 76 |
| MICROTENDIPES SP | 8 |
| RHEOTANYTARSUS | 2 |
| CRICOTOPUS SP. B | 14 |
| EUKIEFFERIELLA B | 10 |
| EUKIEFFERIELLA H | 8 |
| ORTHOCLADIUS B | 16 |
| ORTHOCLADIUS OBU | 8 |
| ABLABESMYIA SP. | 2 |
| WIEDEMANNIA SP. | 2 |
| HEXATOMA SP. | 40 |
| SPERCHON SP. | 2 |
| PHYSA SP. | 10 |
| OLIGOCHAETA | 2 |
| OLIGOCHAETA LUMB | 8 |
| TURBELLARI | 2 |

| 02D-11H | |
|---|---|
| BAETIS INSIGNIFI | 10 |
| BAETIS TRICAUDAT | 48 |
| DRUNELLA DODDSI | 2 |
| EPHEMERELLA INFR | 550 |
| EPEORUS ALBERTAE | 2 |
| RHITHROGENA HAGE | 268 |
| PARALEPTOPHL MEM | 106 |
| CAPNIA-GROUP SP. | 8 |
| ALLOPERLA-GROUP | 58 |
| ZAPADA CINCTIPES | 14 |
| CALINEURIA CALIF | 40 |
| CLAASSENI SABULO | 68 |
| HESPEROPERLA PAC | 4 |
| CULTUS PILATUS | 2 |
| ISOPERLA FULVA | 26 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 10 |
| CHEUMATOPSYCHE | 140 |
| HYDROPSYCHE OCCI | 24 |
| SYMPHITOPS COCKE | 32 |
| SYMPHITOPS SLOSS | 328 |
| HYDROPTILA SP. | 32 |
| LEPIDOSTOMA SP.A | 12 |
| PSYCHOMYIA FLAVI | 2 |
| RHYACOPHILA BIFI | 2 |
| OPTIOSERVUS SPP. | 42 |
| ZAITZEVIA PARVUL | 50 |
| ATHERIX VARIEGAT | 2 |
| MICROTENDIPES SP | 6 |
| POLYPEDILUM SP.A | 4 |
| RHEOTANYTARSUS | 2 |
| TANYTARSUS SP. B | 2 |
| POTTHASTIA SP. | 2 |
| CRICOTOPUS SP. B | 44 |
| EUKIEFFERIELLA B | 14 |
| EUKIEFFERIELLA H | 10 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS OBU | 12 |
| THIENEMANIELL SP | 2 |
| ABLABESMYIA SP. | 2 |
| WIEDEMANNIA SP. | 2 |
| SIMULIUM SP. | 4 |
| ANTOCHA SP. | 2 |
| HEXATOMA SP. | 14 |
| PHYSA SP. | 8 |
| OLIGOCHAETA LUMB | 8 |
| TURBELLARI | 2 |

Table 16. Continued

| 04A-11Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| BAETIS TRICAUDAT | 24 |
| DRUNELLA DODDSI | 4 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 292 |
| RHITHROGENA HAGE | 56 |
| ALLOPERLA-GROUP | 4 |
| HESPEROPERLA PAC | 8 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 32 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 16 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 204 |
| HYDROPSYCHE OCCI | 584 |
| SYMPHITOPS COCKE | 120 |
| SYMPHITOPS SLOSS | 88 |
| HYDROPTILA SP. | 56 |
| PSYCHOMYIA FLAVI | 16 |
| RHYACOPHILA BIFI | 12 |
| PARARGYRACTIS SP | 4 |
| ZAITZEVIA PARVUL | 40 |
| MICROTENDIPES SP | 16 |
| POLYPEDILUM SP.A | 8 |
| CRICOTOPUS SP. B | 12 |
| EUKIEFFERIELLA B | 52 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 4 |
| SIMULIUM SP. | 12 |
| ANTOCHA SP. | 8 |

| 04B-11Q | |
|---|---|
| BAETIS TRICAUDAT | [illegible] |
| DRUNELLA GRANDIS | 16 |
| EPHEMERELLA INFR | [illegible] |
| RHITHROGENA HAGE | [illegible] |
| PARALEPTOPHL HEM | 12 |
| CAPNIA-GROUP SP. | 4 |
| ZAPADA CINCTIPES | 12 |
| CLAASSENI SABULO | 16 |
| HESPEROPERLA PAC | 8 |
| ISOGENOIDES ELON | 24 |
| ISOPERLA FULVA | 68 |
| PTERONARCELLA BA | 12 |
| PTERONARCYS CALI | [illegible] |
| TAENIONEMA PACIF | 16 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 28 |
| CHEUMATOPSYCHE | 416 |
| HYDROPSYCHE OCCI | 692 |
| SYMPHITOPS COCKE | 208 |
| SYMPHITOPS SLOSS | 16 |
| HYDROPTILA SP. | 124 |
| PSYCHOMYIA FLAVI | 32 |
| RHYACOPHILA BIFI | 8 |
| PARARGYRACTIS SP | 8 |
| OPTIOSERVUS SPP. | 28 |
| ZAITZEVIA PARVUL | 40 |
| MICROTENDIPES SP | 80 |
| POLYPEDILUM SP.A | 4 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA B | 28 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS B | 8 |
| ABLABESMYIA SP. | 4 |
| SIMULIUM SP. | 4 |

Table 16. Continued

| 04C-11Q | |
|---|---|
| BAETIS TRICAUDAT | 32 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 344 |
| RHITHROGENA HAGE | 68 |
| PARALEPTOPHL MEM | 4 |
| AMELETUS VELOX | 8 |
| CAPNIA-GROUP SP. | 8 |
| ZAPADA CINCTIPES | 4 |
| ISOGENOIDES ELON | 20 |
| ISOPERLA FULVA | 76 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 16 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 4 |
| ARCTOPSYCHE GRAN | 16 |
| CHEUMATOPSYCHE | 280 |
| HYDROPSYCHE OCCI | 520 |
| SYMPHITOPS COCKE | 144 |
| SYMPHITOPS SLOSS | 44 |
| HYDROPTILA SP. | 160 |
| LEPIDOSTOMA SP.A | 4 |
| PSYCHOMYIA FLAVI | 20 |
| RHYACOPHILA BIFI | 4 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 36 |
| MICROTENDIPES SP | 36 |
| POLYPEDILUM SP.A | 4 |
| RHEOTANYTARSUS | 4 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA B | 28 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA H | 12 |
| ORTHOCLADIUS OBU | 8 |
| ABLABESMYIA SP. | 4 |

| 04D-11Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| BAETIS TRICAUDAT | 40 |
| DRUNELLA GRANDIS | 16 |
| EPHEMERELLA INFR | 240 |
| RHITHROGENA HAGE | 48 |
| PARALEPTOPHL MEM | 8 |
| CAPNIA-GROUP SP. | 12 |
| ALLOPERLA-GROUP | 4 |
| CLAASSENI SABULO | 4 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 16 |
| ISOPERLA FULVA | 68 |
| ISOPERLA QUINQUE | 4 |
| PTERONARCELLA BA | 8 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 8 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 276 |
| HYDROPSYCHE OCCI | 492 |
| SYMPHITOPS COCKE | 140 |
| SYMPHITOPS SLOSS | 32 |
| HYDROPTILA SP. | 84 |
| PSYCHOMYIA FLAVI | 20 |
| PARARGYRACTIS SP | 12 |
| OPTIOSERVUS SPP. | 24 |
| ZAITZEVIA PARVUL | 44 |
| MICROTENDIPES SP | 24 |
| EUKIEFFERIELLA B | 28 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA H | 8 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | [illegible] |
| ABLABESMYIA SP. | 4 |
| WIEDEMANNIA SP. | 4 |
| SIMULIUM SP. | 8 |
| OLIGOCHAETA LUMB | 4 |

Table 16. Continued

| 05A-10H | |
|---|---|
| BAETIS INSIGNIFI | 12 |
| BAETIS TRICAUDAT | 16 |
| EPHEMERELLA INER | 292 |
| RHITHROGENA HAGE | [illegible] |
| PARALEPTOPHL MEM | 4 |
| AMELETUS VELOX | 6 |
| CAPNIA-GROUP SP. | 2 |
| HESPEROPERLA PAC | 2 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 40 |
| PTERONARCELLA BA | 2 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 10 |
| CHEUMATOPSYCHE | 78 |
| HYDROPSYCHE OCCI | 230 |
| SYMPHITOPS COCKE | 80 |
| SYMPHITOPS SLOSS | 16 |
| HYDROPTILA SP. | 6 |
| OECETIS SP. A | 2 |
| PSYCHOMYIA FLAVI | 4 |
| OPTIOSERVUS SPP. | 10 |
| ZAITZEVIA PARVUL | 4 |
| MICROTENDIPES SP | 2 |
| POLYPEDILUM SP.A | 2 |
| CRICOTOPUS SP. B | 28 |
| EUKIEFFERIELLA B | 18 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 2 |
| ABLABESMYIA SP. | 2 |
| WIEDEMANNIA SP. | 2 |
| HEXATOMA SP. | 4 |

| 05B-10H | |
|---|---|
| BAETIS INSIGNIFI | 10 |
| BAETIS TRICAUDAT | 4 |
| DRUNELLA GRANDIS | [illegible] |
| EPHEMERELLA INER | [illegible] |
| RHITHROGENA HAGE | [illegible] |
| PARALEPTOPHL MEM | 4 |
| AMELETUS VELOX | [illegible] |
| CLAASSENI SABULO | 4 |
| ISOPERLA FULVA | 30 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 4 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 164 |
| HYDROPSYCHE OCCI | 342 |
| SYMPHITOPS COCKE | 116 |
| SYMPHITOPS SLOSS | 16 |
| HYDROPTILA SP. | 10 |
| OECETIS SP. A | 2 |
| PSYCHOMYIA FLAVI | 4 |
| RHYACOPHILA BIFI | 4 |
| ZAITZEVIA PARVUL | [illegible] |
| CRICOTOPUS SP. B | 8 |
| EUKIEFFERIELLA B | 26 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS B | [illegible] |
| ORTHOCLADIUS OBU | 2 |
| WIEDEMANNIA SP. | 6 |
| ANTOCHA SP. | 2 |
| HEXATOMA SP. | 4 |

Table 16. Continued

| 05C-10H | |
|---|---|
| BAETIS INSIGNIFI | 20 |
| BAETIS TRICAUDAT | 10 |
| EPHEMERELLA INFR | 532 |
| CINYGMULA SP. | 2 |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 56 |
| PARALEPTOPHL MEM | 8 |
| AMELETUS VELOX | 6 |
| CAPNIA-GROUP SP. | 12 |
| ALLOPERLA-GROUP | 2 |
| ZALADA CINCTIPES | 2 |
| CLAASSENI SABULO | 2 |
| HESPEROPERLA PAC | 8 |
| CULTUS PILATUS | 2 |
| ISOGENOIDES ELON | 14 |
| ISOPERLA FULVA | 82 |
| ISOPERLA QUINQUE | 2 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 2 |
| TAENIONEMA PACIF | 4 |
| ARCTOPSYCHE GRAN | 28 |
| CHEUMATOPSYCHE | 78 |
| HYDROPSYCHE OCCI | 288 |
| SYMPHITOPS COCKE | 110 |
| SYMPHITOPS SLOSS | 22 |
| HYDROPTILA SP. | 14 |
| LEPIDOSTOMA SP.A | 2 |
| PSYCHOMYIA FLAVI | 8 |
| RHYACOPHILA BIFI | 2 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 14 |
| POLYPEDILUM SP.A | 2 |
| CRICOTOPUS SP. B | 16 |
| EUKIEFFERIELLA B | 40 |
| EUKIEFFERIELLA H | 4 |
| HETEROTRISSOCLAD | 2 |
| ORTHOCLADIUS B | 14 |
| ORTHOCLADIUS OBU | 10 |
| WIEDEMANNIA SP. | 4 |
| SIMULIUM SP. | 4 |
| HEXATOMA SP. | 12 |

| 05D-10H | |
|---|---|
| BAETIS INSIGNIFI | 6 |
| BAETIS TRICAUDAT | 2 |
| EPHEMERELLA INFR | 176 |
| RHITHROGENA HAGE | 34 |
| PARALEPTOPHL MEM | 6 |
| CAPNIA-GROUP SP. | 10 |
| ALLOPERLA-GROUP | 4 |
| HESPEROPERLA PAC | 2 |
| CULTUS PILATUS | 2 |
| ISOGENOIDES ELON | 6 |
| ISOPERLA FULVA | 30 |
| ISOPERLA QUINQUE | 2 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 40 |
| HYDROPSYCHE OCCI | 88 |
| SYMPHITOPS COCKE | 50 |
| SYMPHITOPS SLOSS | 10 |
| HYDROPTILA SP. | 2 |
| LEPIDOSTOMA SP.A | 2 |
| OECETIS SP. A | 2 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 8 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA B | 6 |
| ORTHOCLADIUS B | 2 |
| HEXATOMA SP. | 14 |

Table 16. Continued

| 06A-10H | |
|---|---|
| BAETIS INSIGNIFI | 10 |
| BAETIS TRICAUDAT | 6 |
| EPHEMERELLA INFR | 304 |
| HEPTAGENIA SOLIT | 6 |
| RHITHROGENA HAGE | 10 |
| PARALEPTOPHL MEM | 4 |
| HESPEROPERLA PAC | 2 |
| ISOPERLA FULVA | 16 |
| PTERONARCELLA BA | 2 |
| PTERONARCYS CALI | 2 |
| OPHIOGOMPHUS SP. | 2 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 176 |
| HYDROPSYCHE OCCI | 46 |
| SYMPHITOPS COCKE | 16 |
| HYDROPTILA SP. | 20 |
| LEPIDOSTOMA SP.A | 2 |
| OECETIS SP. A | 66 |
| PSYCHOMYIA FLAVI | 18 |
| RHYACOPHILA BIFI | 2 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 18 |
| CRYPTOCHIRONOMUS | 2 |
| MICROTENDIPES SP | 48 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS OBU | 12 |
| THIENEMANIELL SP | 2 |
| ABLABESMYIA SP. | 4 |
| SIMULIUM SP. | 2 |
| HEXATOMA SP. | 10 |

| 06B-10H | |
|---|---|
| BAETIS INSIGNIFI | 14 |
| BAETIS TRICAUDAT | 14 |
| DRUNELLA GRANDIS | 6 |
| EPHEMERELLA INFR | 494 |
| CINYGMULA SP. | 2 |
| HEPTAGENIA SOLIT | 28 |
| RHITHROGENA HAGE | 54 |
| PARALEPTOPHL MEM | 16 |
| AMELETUS VELOX | 4 |
| CLAASSENI SABULO | 2 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 16 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 4 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 140 |
| HYDROPSYCHE OCCI | 78 |
| SYMPHITOPS COCKE | 34 |
| HYDROPTILA SP. | 16 |
| ZUMATRICHIA NOTO | 2 |
| CERACLEA SP. | 2 |
| OECETIS SP. A | 38 |
| PSYCHOMYIA FLAVI | 36 |
| PARARGYRACTIS SP | 2 |
| OPTIOSERVUS SPP. | 6 |
| ZAITZEVIA PARVUL | 16 |
| ATHERIX VARIEGAT | 4 |
| MICROTENDIPES SP | 4 |
| EUKIEFFERIELLA B | 2 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS OBU | 18 |
| SYNORTHOCLADIUS | 2 |
| ABLABESMYIA SP. | 2 |

Table 16. Continued

| 06C-10H | |
|---|---|
| BAETIS INSIGNIFI | 8 |
| BAETIS TRICAUDAT | 10 |
| EPHEMERELLA INFR | 398 |
| HEPTAGENIA SOLIT | 14 |
| RHITHROGENA HAGE | 20 |
| PARALEPTOPHL MEM | 8 |
| ALLOPERLA-GROUP | 2 |
| CULTUS PILATUS | 2 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 12 |
| PTERONARCELLA BA | 2 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 126 |
| HYDROPSYCHE OCCI | 84 |
| SYMPHITOPS COCKE | 36 |
| HYDROPTILA SP. | 24 |
| OECETIS SP. A | 50 |
| PSYCHOMYIA FLAVI | 30 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 6 |
| MICROTENDIPES SP | 28 |
| CRICOTOPUS SP. B | 2 |
| EUKIEFFERIELLA E | 2 |
| EUKIEFFERIELLA H | 2 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 6 |
| ABLABESMYIA SP. | 2 |
| ANTOCHA SP. | 2 |
| HEXATOMA SP. | 2 |

| 06D-10H | |
|---|---|
| BAETIS INSIGNIFI | 2 |
| BAETIS TRICAUDAT | 10 |
| EPHEMERELLA INFR | 518 |
| HEPTAGENIA SOLIT | 24 |
| RHITHROGENA HAGE | 40 |
| PARALEPTOPHL MEM | 2 |
| ALLOPERLA-GROUP | 2 |
| CLAASSENI SABULO | 2 |
| CULTUS PILATUS | 2 |
| ISOGENOIDES ELON | 2 |
| ISOPERLA FULVA | 16 |
| ISOPERLA QUINQUE | 2 |
| PTERONARCELLA BA | 2 |
| PTERONARCYS CALI | 2 |
| BRACHYCENTRUS AM | 2 |
| CHEUMATOPSYCHE | 154 |
| HYDROPSYCHE OCCI | 78 |
| SYMPHITOPS COCKE | 28 |
| HYDROPTILA SP. | 4 |
| CERACLEA SP. | 2 |
| OECETIS SP. A | 16 |
| PSYCHOMYIA FLAVI | 28 |
| OREODYTES SCITIL | 4 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 20 |
| ATHERIX VARIEGAT | 2 |
| MICROTENDIPES SP | 4 |
| POLYPEDILUM SP.A | 2 |
| CRICOTOPUS SP. B | 4 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 6 |
| ABLABESMYIA SP. | 2 |
| CHELIFERA SP. | 2 |
| WIEDEMANNIA SP. | 4 |
| HEXATOMA SP. | 4 |

Table 16. Continued

| 08A-10Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| BAETIS TRICAUDAT | 4 |
| EPHEMERELLA INFR | 500 |
| RHITHROGENA HAGE | 8 |
| ALLOPERLA-GROUP | 4 |
| ZAPADA CINCTIPES | 12 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 4 |
| PTERONARCELLA BA | 4 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 40 |
| HYDROPSYCHE OCCI | 140 |
| SYMPHITOPS COCKE | 68 |
| HYDROPTILA SP. | 44 |
| OECETIS SP. A | 8 |
| PSYCHOMYIA FLAVI | 8 |
| PARARGYRACTIS SP | 12 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 4 |
| DICROTENDIP SP.C | 4 |
| MICROTENDIPES SP | 68 |
| PHAENOPSECTRA SP | 8 |
| TANYTARSUS SP. B | 56 |
| DIAMESA SP. B | 4 |
| POTTHASTIA SP. | 4 |
| CRICOTOPUS SP. B | 64 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA H | 12 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 12 |
| ABLABESMYIA SP. | 4 |
| WIEDEMANNIA SP. | 4 |
| OLIGOCHAETA | 12 |
| OLIGOCHAETA LUMB | 4 |

| 08B-10Q | |
|---|---|
| BAETIS INSIGNIFI | 8 |
| BAETIS TRICAUDAT | 4 |
| EPHEMERELLA INFR | 368 |
| RHITHROGENA HAGE | 8 |
| CAPNIA-GROUP SP. | 8 |
| ZAPADA CINCTIPES | 4 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 88 |
| HYDROPSYCHE OCCI | 176 |
| SYMPHITOPS COCKE | 52 |
| HYDROPTILA SP. | 28 |
| PSYCHOMYIA FLAVI | 48 |
| PARARGYRACTIS SP | 12 |
| OPTIOSERVUS SPP. | 4 |
| CHIRONOMUS SP. | 40 |
| MICROTENDIPES SP | 52 |
| PHAENOPSECTRA SP | 16 |
| POLYPEDILUM SP.A | 28 |
| TANYTARSUS SP. B | 84 |
| DIAMESA SP. B | 4 |
| CRICOTOPUS SP. B | 32 |
| EUKIEFFERIELLA B | 12 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 8 |
| OLIGOCHAETA | 4 |
| OLIGOCHAETA LUMB | 4 |

Table 16. Continued

| 08C-10Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| BAETIS TRICAUDAT | 8 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 440 |
| RHITHROGENA HAGE | 4 |
| CAPNIA-GROUP SP. | 16 |
| ISOGENOIDES ELON | 4 |
| PTERONARCYS CALI | 8 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 84 |
| HYDROPSYCHE OCCI | 204 |
| SYMPHITOPS COCKE | 100 |
| HYDROPTILA SP. | 76 |
| OECETIS SP. A | 12 |
| PSYCHOMYIA FLAVI | 24 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 4 |
| CHIRONOMUS SP. | 12 |
| MICROTENDIPES SP | 76 |
| PHAENOPSECTRA SP | 16 |
| POLYPEDILUM SP.A | 8 |
| TANYTARSUS SP. B | 72 |
| DIAMESA SP. B | 4 |
| CRICOTOPUS SP. B | 36 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS OBU | 16 |
| WIEDEMANNIA SP. | 4 |
| EPHYDRIDAE | 4 |

| 08D-10Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 356 |
| RHITHROGENA HAGE | 4 |
| AMELETUS VELOX | 4 |
| TRICORYTHODES MI | 4 |
| CAPNIA-GROUP SP. | 4 |
| HESPEROPERLA PAC | 4 |
| ISOPERLA FULVA | 8 |
| PTERONARCELLA BA | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 120 |
| HYDROPSYCHE OCCI | 196 |
| SYMPHITOPS COCKE | 68 |
| HYDROPTILA SP. | 64 |
| LEPIDOSTOMA SP.A | 8 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 8 |
| PARARGYRACTIS SP | 16 |
| OPTIOSERVUS SPP. | 16 |
| ZAITZEVIA PARVUL | 4 |
| MICROTENDIPES SP | 52 |
| POLYPEDILUM SP.A | 12 |
| TANYTARSUS SP. B | 24 |
| DIAMESA SP. B | 4 |
| CRICOTOPUS SP. B | 12 |
| EUKIEFFERIELLA B | 20 |
| EUKIEFFERIELLA H | 12 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 20 |
| ABLABESMYIA SP. | 4 |
| OLIGOCHAETA | 8 |

Table 16. Continued

| 09A-10Q | |
|---|---|
| BAETIS INSIGNIFI | 12 |
| BAETIS TRICAUDAT | 4 |
| EPHEMERELLA INFR | 420 |
| HEPTAGENIA SOLIT | 20 |
| RHITHROGENA HAGE | 28 |
| PARALEPTOPHL MEM | 4 |
| CAPNIA-GROUP SP. | 12 |
| ISOGENOIDES ELON | 12 |
| ISOPERLA FULVA | 4 |
| SKWALA PARALLELA | 4 |
| CHEUMATOPSYCHE | 108 |
| HYDROPSYCHE OCCI | 28 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 132 |
| OECETIS SP. A | 24 |
| PSYCHOMYIA FLAVI | 84 |
| MICROTENDIPES SP | 48 |
| PHAENOPSECTRA SP | 4 |
| TANYTARSUS SP. B | 36 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA B | 8 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 72 |
| HEXATOMA SP. | 4 |
| OLIGOCHAETA | 4 |

| 09B-10Q | |
|---|---|
| BAETIS TRICAUDAT | 8 |
| EPHEMERELLA INFR | 406 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 64 |
| PARALEPTOPHL MEM | 4 |
| AMELETUS VELOX | 16 |
| CAPNIA-GROUP SP. | 4 |
| ISOPERLA FULVA | 28 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 4 |
| CHEUMATOPSYCHE | 272 |
| HYDROPSYCHE OCCI | 184 |
| SYMPHITOPS COCKE | 76 |
| HYDROPTILA SP. | 140 |
| LEPIDOSTOMA SP.A | 4 |
| OECETIS SP. A | 24 |
| PSYCHOMYIA FLAVI | 36 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 20 |
| MICROTENDIPES SP | 4 |
| PHAENOPSECTRA SP | 4 |
| TANYTARSUS SP. B | 24 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS OBU | 44 |
| WIEDEMANNIA SP. | 4 |

Table 16. Continued

| 10C-10Q | |
|---|---|
| BAETIS INSIGNIFI | 28 |
| BAETIS TRICAUDAT | 44 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 192 |
| RHITHROGENA HAGE | 28 |
| PARALEPTOPHL MEM | 4 |
| CLAASSENI SABULO | 8 |
| ISOPERLA FULVA | 20 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 8 |
| TAENIONEMA PACIF | 4 |
| BRACHYCENTRUS OC | 12 |
| PROTOPTILA SP. | 4 |
| ARCTOPSYCHE GRAN | 16 |
| CHEUMATOPSYCHE | 364 |
| HYDROPSYCHE OCCI | 272 |
| SYMPHITOPS COCKE | 80 |
| SYMPHITOPS SLOSS | 4 |
| HYDROPTILA SP. | 460 |
| LEPIDOSTOMA SP.A | 4 |
| PSYCHOMYIA FLAVI | 32 |
| PARARGYRACTIS SP | 60 |
| OPTIOSERVUS SPP. | 184 |
| ZAITZEVIA PARVUL | 44 |
| MICROPSECTR SP.A | 12 |
| POLYPEDILUM SP.A | 4 |
| TANYTARSUS SP. B | 4 |
| CRICOTOPUS SP. B | 24 |
| EUKIEFFERIELLA B | 156 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 12 |
| THIENEMANIELL SP | 4 |
| SIMULIUM SP. | 4 |
| ANTOCHA SP. | 4 |
| OLIGOCHAETA LUMB | 8 |

| 10D-10Q | |
|---|---|
| BAETIS INSIGNIFI | 16 |
| BAETIS TRICAUDAT | 36 |
| DRUNELLA GRANDIS | 8 |
| EPHEMERELLA INFR | 296 |
| HEPTAGENIA SOLIT | 16 |
| RHITHROGENA HAGE | 92 |
| PARALEPTOPHL MEM | 12 |
| AMELETUS VELOX | 4 |
| CLAASSENI SABULO | 36 |
| ISOPERLA FULVA | 24 |
| SKWALA PARALLELA | 8 |
| PTERONARCELLA BA | 20 |
| TAENIONEMA PACIF | 4 |
| BRACHYCENTRUS OC | 16 |
| ARCTOPSYCHE GRAN | 24 |
| CHEUMATOPSYCHE | 468 |
| HYDROPSYCHE OCCI | 520 |
| SYMPHITOPS COCKE | 128 |
| HYDROPTILA SP. | 296 |
| PSYCHOMYIA FLAVI | 8 |
| PARARGYRACTIS SP | 24 |
| OPTIOSERVUS SPP. | 188 |
| ZAITZEVIA PARVUL | 92 |
| ATHERIX VARIEGAT | 4 |
| MICROPSECTR SP.A | 20 |
| MICROTENDIPES SP | 4 |
| POLYPEDILUM SP.A | 4 |
| TANYTARSUS SP. B | 4 |
| CRICOTOPUS SP. B | 24 |
| EUKIEFFERIELLA B | 52 |
| EUKIEFFERIELLA E | 12 |
| HETEROTRISSOCLAD | 8 |
| ORTHOCLADIUS OBU | 8 |
| ABLABESMYIA SP. | 4 |
| CHELIFERA SP. | 12 |
| WIEDEMANNIA SP. | 8 |
| SIMULIUM SP. | 16 |
| ANTOCHA SP. | 16 |
| OLIGOCHAETA LUMB | 4 |

Table 16. Continued

| 11A-10Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| BAETIS TRICAUDAT | 20 |
| EPHEMERELLA INFR | 748 |
| HEPTAGENIA SOLIT | 8 |
| RHITHROGENA HAGE | 64 |
| AMELETUS VELOX | 20 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 20 |
| ISOPERLA FULVA | 32 |
| PTERONARCELLA BA | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 84 |
| HYDROPSYCHE OCCI | 364 |
| SYMPHITOPS COCKE | 16 |
| SYMPHITOPS SLOSS | 8 |
| HYDROPTILA SP. | 504 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 16 |
| ATHERIX VARIEGAT | 32 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 108 |
| POLYPEDILUM SP.A | 8 |
| CRICOTOPUS SP. B | 56 |
| DIAMESA SP. B | 4 |
| EUKIEFFERIELLA B | 24 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA H | 12 |
| ORTHOCLADIUS OBU | 72 |
| HEXATOMA SP. | 12 |
| OLIGOCHAETA | 4 |

| 11B-10Q | |
|---|---|
| BAETIS INSIGNIFI | 32 |
| BAETIS TRICAUDAT | 36 |
| EPHEMERELLA INFR | 1080 |
| HEPTAGENIA SOLIT | 12 |
| RHITHROGENA HAGE | 152 |
| PARALEPTOPHL MEM | 20 |
| AMELETUS VELOX | 8 |
| CLAASSENI SABULO | 8 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 28 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 16 |
| CHEUMATOPSYCHE | 32 |
| HYDROPSYCHE OCCI | 408 |
| SYMPHITOPS COCKE | 16 |
| SYMPHITOPS SLOSS | 8 |
| HYDROPTILA SP. | 840 |
| LEPIDOSTOMA SP.A | 8 |
| OPTIOSERVUS SPP. | 16 |
| ZAITZEVIA PARVUL | 28 |
| ATHERIX VARIEGAT | 40 |
| MICROPSECTR SP.A | 12 |
| MICROTENDIPES SP | 48 |
| TANYTARSUS SP. B | 8 |
| CRICOTOPUS SP. B | 64 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 76 |
| WIEDEMANNIA SP. | 8 |
| HEXATOMA SP. | 4 |

| | |
|---|---|
| 11C-10Q | |
| BAETIS INSIGNIFI | 12 |
| BAETIS TRICAUDAT | 8 |
| EPHEMERELLA INFR | 708 |
| RHITHROGENA HAGE | 112 |
| PARALEPTOPHL MEM | 8 |
| AMELETUS VELOX | 8 |
| ZAPADA CINCTIPES | 4 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 24 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 8 |
| ARCTOPSYCHE GRAN | 24 |
| CHEUMATOPSYCHE | 104 |
| HYDROPSYCHE OCCI | 704 |
| SYMPHITOPS COCKE | 36 |
| HYDROPTILA SP. | 384 |
| LEPIDOSTOMA SP.A | 4 |
| PSYCHOMYIA FLAVI | 8 |
| OPTIOSERVUS SPP. | 32 |
| ZAITZEVIA PARVUL | 28 |
| ATHERIX VARIEGAT | 28 |
| MICROPSECTR SP.A | 24 |
| MICROTENDIPES SP | 60 |
| POLYPEDILUM SP.A | 4 |
| TANYTARSUS SP. B | 16 |
| CRICOTOPUS SP. B | 88 |
| EUKIEFFERIELLA B | 28 |
| EUKIEFFERIELLA E | 24 |
| ORTHOCLADIUS B | 16 |
| ORTHOCLADIUS OBU | 100 |
| ABLABESMYIA SP. | 4 |
| WIEDEMANNIA SP. | 4 |
| HEXATOMA SP. | 4 |

| | |
|---|---|
| 11D-10Q | |
| BAETIS INSIGNIFI | 20 |
| BAETIS TRICAUDAT | 4 |
| EPHEMERELLA INFR | 660 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 64 |
| PARALEPTOPHL MEM | 16 |
| AMELETUS VELOX | 28 |
| CLAASSENI SABULO | 8 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 16 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 4 |
| TAENIONEMA PACIF | 4 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 112 |
| HYDROPSYCHE OCCI | 260 |
| SYMPHITOPS COCKE | 20 |
| HYDROPTILA SP. | 516 |
| LEPIDOSTOMA SP.A | 4 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 16 |
| ZAITZEVIA PARVUL | 16 |
| ATHERIX VARIEGAT | 8 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 160 |
| TANYTARSUS SP. B | 12 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 76 |
| EUKIEFFERIELLA B | 8 |
| ORTHOCLADIUS B | 20 |
| ORTHOCLADIUS OBU | 104 |
| WIEDEMANNIA SP. | 4 |
| HEXATOMA SP. | 16 |
| OLIGOCHAETA | 4 |

Table 16. Continued

| 13A-10Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| BAETIS TRICAUDAT | 8 |
| EPHEMERELLA INFR | 200 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 24 |
| PARALEPTOPHL MEM | 4 |
| CAPNIA-GROUP SP. | 4 |
| ISOGENOIDES ELON | 16 |
| ISOPERLA FULVA | 8 |
| SKWALA PARALLELA | 8 |
| PTERONARCELLA BA | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 84 |
| HYDROPSYCHE OCCI | 116 |
| SYMPHITOPS COCKE | 8 |
| HYDROPTILA SP. | 1044 |
| ZUMATRICHIA NOTO | 4 |
| OECETIS SP. A | 12 |
| PSYCHOMYIA FLAVI | 4 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 8 |
| ATHERIX VARIEGAT | 4 |
| CRYPTOCHIRONOMUS | 4 |
| MICROTENDIPES SP | 568 |
| DIAMESA SP. B | 12 |
| CRICOTOPUS SP. B | 16 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS OBU | 40 |
| ABLABESMYIA SP. | 4 |
| OLIGOCHAETA | 16 |
| OLIGOCHAETA LUMB | 4 |

| 13B-10Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| EPHEMERELLA INFR | 136 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 4 |
| PARALEPTOPHL MEM | 8 |
| AMELETUS VELOX | 16 |
| PROSTOIA BESAMET | 4 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 4 |
| CHEUMATOPSYCHE | 36 |
| HYDROPSYCHE OCCI | 4 |
| HYDROPTILA SP. | 908 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 388 |
| PHAENOPSECTRA SP | 28 |
| TANYTARSUS SP. B | 12 |
| DIAMESA SP. B | 16 |
| DIAMESA SP. C | 4 |
| CRICOTOPUS SP. B | 28 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS OBU | 80 |
| HEXATOMA SP. | 4 |
| OLIGOCHAETA | 44 |

Table 16. Continued

| 13C-10Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| EPHEMERELLA INFR | 268 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 4 |
| STENONEMA SP. | 4 |
| PARALEPTOPHL MEM | 8 |
| AMELETUS VELOX | 8 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 12 |
| ISOPERLA FULVA | 4 |
| CHEUMATOPSYCHE | 52 |
| HYDROPSYCHE OCCI | 44 |
| SYMPHITOPS. COCKE | 4 |
| HYDROPTILA SP. | 1196 |
| OECETIS SP. A | 8 |
| PSYCHOMYIA FLAVI | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 16 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 632 |
| PHAENOPSECTRA SP | 12 |
| TANYTARSUS SP. B | 8 |
| DIAMESA SP. B | 8 |
| DIAMESA SP. C | 4 |
| CRICOTOPUS SP. B | 32 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 28 |
| ABLABESMYIA SP. | 4 |
| TIPULA SP. | 4 |
| OLIGOCHAETA | 20 |

| 13D-10Q | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| EPHEMERELLA INFR | 180 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 28 |
| AMELETUS VELOX | 20 |
| CAPNIA-GROUP SP. | 8 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 4 |
| PTERONARCELLA BA | 4 |
| CHEUMATOPSYCHE | 68 |
| HYDROPSYCHE OCCI | 8 |
| HYDROPTILA SP. | 1092 |
| OECETIS SP. A | 16 |
| PSYCHOMYIA FLAVI | 8 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 8 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 428 |
| PHAENOPSECTRA SP | 4 |
| TANYTARSUS SP. B | 20 |
| DIAMESA SP. B | 12 |
| DIAMESA SP. C | 4 |
| CRICOTOPUS SP. B | 48 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 60 |
| THIENEMANIELL SP | 4 |
| CHELIFERA SP. | 4 |
| HEXATOMA SP. | 4 |
| OLIGOCHAETA | 20 |

Table 16. Continued

| 14A-10Q | |
|---|---|
| BAETIS INSIGNIFI | 8 |
| EPHEMERELLA INFR | 396 |
| RHITHROGENA HAGE | 12 |
| PARALEPTOPHL MEM | 4 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 8 |
| SKWALA PARALLELA | 4 |
| CHEUMATOPSYCHE | 276 |
| HYDROPSYCHE OCCI | 256 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 480 |
| CERACLEA SP. | 4 |
| OECETIS SP. A | 4 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 4 |
| ATHERIX VARIEGAT | 8 |
| MICROPSECTR SP.A | 20 |
| MICROTENDIPES SP | 224 |
| PHAENOPSECTRA SP | 4 |
| CRICOTOPUS SP. B | 16 |
| EUKIEFFERIELLA B | 12 |
| ORTHOCLADIUS OBU | 20 |
| SYNORTHOCLADIUS | 4 |
| HYALELLA AZTECA | 4 |

| 14B-10Q | |
|---|---|
| BAETIS TRICAUDAT | 12 |
| EPHEMERELLA INFR | 72 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 24 |
| PARALEPTOPHL MEM | 4 |
| ISOPERLA FULVA | 4 |
| TAENIONEMA PACIF | 4 |
| CHEUMATOPSYCHE | 24 |
| HYDROPSYCHE OCCI | 24 |
| HYDROPTILA SP. | 612 |
| OPTIOSERVUS SPP. | 8 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 148 |
| PARACLADOPE SP.A | 4 |
| TANYTARSUS SP. B | 8 |
| CRICOTOPUS SP. B | 32 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS OBU | 64 |
| THIENEMANIELL SP | 4 |
| WIEDEMANNIA SP. | 4 |
| SIMULIUM SP. | 4 |
| HEXATOMA SP. | 4 |
| HYALELLA AZTECA | 8 |
| OLIGOCHAETA | 80 |

| 14C-10Q | |
|---|---|
| BAETIS TRICAUDAT | 8 |
| CAENIS SIMULANS | 4 |
| EPHEMERELLA INFR | 484 |
| HEPTAGENIA SOLIT | 36 |
| RHITHROGENA HAGE | 24 |
| PARALEPTOPHL MEM | 8 |
| AMELETUS VELOX | 4 |
| CLAASSENI SABULO | 4 |
| ISOPERLA FULVA | 8 |
| SKWALA PARALLELA | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 416 |
| HYDROPSYCHE OCCI | 300 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 440 |
| OECETIS SP. A | 16 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 12 |
| ATHERIX VARIEGAT | 4 |
| MICROPSECTR SP.A | 16 |
| MICROTENDIPES SP | 268 |
| PHAENOPSECTRA SP | 4 |
| STICTOCHIRONO SP | 4 |
| CRICOTOPUS SP. B | 16 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 36 |
| ABLABESMYIA SP. | 8 |
| GYRAULUS SP. | 4 |
| OLIGOCHAETA | 68 |
| OLIGOCHAETA LUMB | 4 |

| 14D-10Q | |
|---|---|
| BAETIS INSIGNIFI | 24 |
| CAENIS SIMULANS | 4 |
| EPHEMERELLA INFR | 496 |
| HEPTAGENIA SOLIT | 16 |
| RHITHROGENA HAGE | 12 |
| PARALEPTOPHL MEM | 20 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 24 |
| PTERONARCELLA BA | 4 |
| CHEUMATOPSYCHE | 284 |
| HYDROPSYCHE OCCI | 348 |
| SYMPHITOPS COCKE | 8 |
| HYDROPTILA SP. | 780 |
| OECETIS SP. A | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 8 |
| ATHERIX VARIEGAT | 12 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 188 |
| TANYTARSUS SP. B | 8 |
| CRICOTOPUS SP. B | 24 |
| EUKIEFFERIELLA H | 4 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 44 |
| ABLABESMYIA SP. | 4 |
| HEXATOMA SP. | 4 |
| HYALELLA AZTECA | 4 |
| OLIGOCHAETA | 80 |

Table 16. Continued

| 15A-10Q | |
|---|---|
| BAETIS INSIGNIFI | 20 |
| BAETIS TRICAUDAT | 36 |
| EPHEMERELLA INFR | 2748 |
| RHITHROGENA HAGE | 268 |
| PARALEPTOPHL MEM | 28 |
| AMELETUS VELOX | 20 |
| CLAASSENI SABULO | 24 |
| ISOGENOIDES ELON | 20 |
| ISOPERLA FULVA | 84 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 8 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 420 |
| HYDROPSYCHE OCCI | 1776 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 1204 |
| OPTIOSERVUS SPP. | 60 |
| ZAITZEVIA PARVUL | 44 |
| ATHERIX VARIEGAT | 8 |
| MICROPSECTR SP.A | 16 |
| MICROTENDIPES SP | 264 |
| TANYTARSUS SP. B | 4 |
| CRICOTOPUS SP. B | 112 |
| EUKIEFFERIELLA B | 8 |
| EUKIEFFERIELLA E | 12 |
| EUKIEFFERIELLA H | 8 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 48 |
| SIMULIUM SP. | 8 |
| TIPULA SP. | 4 |

| 15B-10Q | |
|---|---|
| BAETIS INSIGNIFI | 36 |
| BAETIS TRICAUDAT | 4 |
| EPHEMERELLA INFR | 588 |
| RHITHROGENA HAGE | 64 |
| AMELETUS VELOX | 12 |
| CLAASSENI SABULO | 16 |
| ISOGENOIDES ELON | 8 |
| PTERONARCELLA BA | 16 |
| TAENIONEMA PACIF | 4 |
| CHEUMATOPSYCHE | 72 |
| HYDROPSYCHE OCCI | 184 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 388 |
| OECETIS SP. A | 12 |
| OPTIOSERVUS SPP. | 12 |
| MICROPSECTR SP.A | 8 |
| MICROTENDIPES SP | 72 |
| POLYPEDILUM SP.A | 4 |
| TANYTARSUS SP. B | 4 |
| CRICOTOPUS SP. B | 64 |
| EUKIEFFERIELLA F | 12 |
| EUKIEFFERIELLA H | 16 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 36 |
| PSECTROCLADIUS B | 4 |
| WIEDEMANNIA SP. | 4 |
| HEXATOMA SP. | 8 |

Table 16. Continued

| 15C-10Q | |
|---|---|
| BAETIS INSIGNIFI | 12 |
| BAETIS TRICAUDAT | 4 |
| EPHEMERELLA INFR | 1228 |
| HEPTAGENIA SOLIT | 40 |
| RHITHROGENA HAGE | 232 |
| PARALEPTOPHL MEM | 20 |
| AMELETUS VELOX | 56 |
| TRICORYTHODES MI | 4 |
| CAPNIA-GROUP SP. | 4 |
| CLAASSENI SABULO | 12 |
| ISOGENOIDES ELON | 16 |
| ISOPERLA FULVA | 32 |
| PTERONARCELLA BA | 8 |
| ARCTOPSYCHE GRAI | 4 |
| CHEUMATOPSYCHE | 176 |
| HYDROPSYCHE OCCI | 208 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 788 |
| OECETIS SP. A | 4 |
| OPTIOSERVUS SPP. | 36 |
| MICROPSECTR SP.A | 12 |
| MICROTENDIPES SP | 308 |
| POLYPEDILUM SP.A | 4 |
| CRICOTOPUS SP. B | 40 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA H | 12 |
| ORTHOCLADIUS OBU | 48 |
| ABLABESMYIA SP. | 4 |

| 15D-10Q | |
|---|---|
| BAETIS INSIGNIFI | 20 |
| BAETIS TRICAUDAT | 16 |
| EPHEMERELLA INFR | 868 |
| RHITHROGENA HAGE | 136 |
| PARALEPTOPHL MEM | 4 |
| AMELETUS VELOX | 32 |
| CAPNIA-GROUP SP. | 12 |
| CLAASSENI SABULO | 12 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 12 |
| ISOPERLA FULVA | 12 |
| PTERONARCELLA BA | 8 |
| CHEUMATOPSYCHE | 140 |
| HYDROPSYCHE OCCI | 608 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 256 |
| OPTIOSERVUS SPP. | 32 |
| ZAITZEVIA PARVUL | 32 |
| CLADOTANYTA SP.A | 4 |
| MICROTENDIPES SP | 32 |
| POLYPEDILUM SP.A | 4 |
| TANYTARSUS SP. B | 8 |
| DIAMESA SP. B | 16 |
| CRICOTOPUS SP. B | 76 |
| EUKIEFFERIELLA B | 16 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA F | 4 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 40 |
| WIEDEMANNIA SP. | 4 |
| SIMULIUM SP. | 16 |
| HEXATOMA SP. | 12 |
| OLIGOCHAETA | 4 |

Table 16. Continued

| 19A-10H | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| BAETIS TRICAUDAT | 24 |
| EPHEMERELLA INFR | 236 |
| HEPTAGENIA SOLIT | 6 |
| RHITHROGENA HAGE | 12 |
| PARALEPTOPHL MEM | 6 |
| AMELETUS VELOX | 4 |
| ISOGENOIDES ELON | 6 |
| ISOPERLA FULVA | 6 |
| SKWALA PARALLELA | 2 |
| BRACHYCENTRUS OC | 2 |
| CHEUMATOPSYCHE | 54 |
| HYDROPSYCHE OCCI | 90 |
| SYMPHITOPS COCKE | 8 |
| HYDROPTILA SP. | 150 |
| ZUMATRICHIA NOTO | 2 |
| PSYCHOMYIA FLAVI | 48 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 4 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 30 |
| POLYPEDILUM SP.A | 4 |
| CRICOTOPUS SP. B | 8 |
| EUKIEFFERIELLA B | 8 |
| EUKIEFFERIELLA F | 2 |
| EUKIEFFERIELLA H | 2 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 18 |

| 19B-10H | |
|---|---|
| BAETIS INSIGNIFI | 6 |
| BAETIS TRICAUDAT | 52 |
| DRUNELLA GR INGE | 2 |
| EPHEMERELLA INFR | 532 |
| HEPTAGENIA SOLIT | 24 |
| RHITHROGENA HAGE | 14 |
| PARALEPTOPHL MEM | 26 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 8 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 196 |
| HYDROPSYCHE OCCI | 136 |
| SYMPHITOPS COCKE | 32 |
| SYMPHITOPS SLOSS | 2 |
| HYDROPTILA SP. | 202 |
| LEUCOTRICHIA PIC | 2 |
| PSYCHOMYIA FLAVI | 46 |
| OPTIOSERVUS SPP. | 6 |
| ZAITZEVIA PARVUL | 4 |
| MICROTENDIPES SP | 54 |
| CRICOTOPUS SP. B | 14 |
| EUKIEFFERIELLA B | 2 |
| EUKIEFFERIELLA F | 2 |
| EUKIEFFERIELLA H | 6 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 18 |

Table 16. Continued

| 19C-10H | | 19D-10H | |
|---|---|---|---|
| BAETIS INSIGNIFI | 2 | BAETIS INSIGNIFI | 2 |
| BAETIS TRICAUDAT | 42 | BAETIS TRICAUDAT | 50 |
| DRUNELLA GR INGE | 6 | EPHEMERELLA INFR | 246 |
| EPHEMERELLA INFR | 400 | CINYGMULA SP. | 2 |
| HEPTAGENIA SOLIT | 8 | HEPTAGENIA SOLIT | 20 |
| RHITHROGENA HAGE | 12 | RHITHROGENA HAGE | 16 |
| PARALEPTOPHL MEM | 14 | PARALEPTOPHL MEM | 30 |
| ISOGENOIDES ELON | 4 | AMELETUS VELOX | 4 |
| ISOPERLA FULVA | 4 | ISOGENOIDES ELON | 6 |
| SKWALA PARALLELA | 2 | ISOPERLA FULVA | 6 |
| TAENIONEMA PACIF | 2 | SKWALA PARALLELA | 2 |
| CHEUMATOPSYCHE | 108 | ARCTOPSYCHE GRAN | 2 |
| HYDROPSYCHE OCCI | 192 | CHEUMATOPSYCHE | 100 |
| SYMPHITOPS COCKE | 36 | HYDROPSYCHE OCCI | 92 |
| HYDROPTILA SP. | 134 | SYMPHITOPS COCKE | 20 |
| LEUCOTRICHIA PIC | 2 | SYMPHITOPS SLOSS | 2 |
| OECETIS SP. A | 4 | HYDROPTILA SP. | 150 |
| PSYCHOMYIA FLAVI | 34 | OECETIS SP. A | 6 |
| OPTIOSERVUS SPP. | 10 | PSYCHOMYIA FLAVI | 22 |
| ZAITZEVIA PARVUL | 12 | PARARGYRACTIS SP | 2 |
| MICROPSECTR SP.A | 2 | OPTIOSERVUS SPP. | 2 |
| MICROTENDIPES SP | 34 | ZAITZEVIA PARVUL | 2 |
| CRICOTOPUS SP. B | 2 | MICROTENDIPES SP | 18 |
| EUKIEFFERIELLA B | 6 | POLYPEDILUM SP.A | 4 |
| EUKIEFFERIELLA E | 2 | CRICOTOPUS SP. B | 2 |
| ORTHOCLADIUS OBU | 8 | EUKIEFFERIELLA B | 2 |
| SYNORTHOCLADIUS | 2 | EUKIEFFERIELLA F | 4 |
| OLIGOCHAETA LUMB | 2 | ORTHOCLADIUS B | 2 |
| | | ORTHOCLADIUS OBU | 6 |

Table 16. Continued

| 21A-10H | |
|---|---|
| BAETIS INSIGNIFI | 2 |
| BAETIS TRICAUDAT | 4 |
| DRUNELLA GR INGE | 4 |
| EPHEMERELLA INFR | 632 |
| CINYGMULA SP. | 8 |
| HEPTAGENIA SOLIT | 6 |
| RHITHROGENA HAGE | 8 |
| PARALEPTOPHL MEM | 30 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 2 |
| ISOPERLA FULVA | 16 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 4 |
| BRACHYCENTRUS OC | 6 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 70 |
| HYDROPSYCHE OCCI | 88 |
| SYMPHITOPS COCKE | 26 |
| SYMPHITOPS SLOSS | 2 |
| HYDROPTILA SP. | 198 |
| LEPIDOSTOMA SP.A | 2 |
| CERACLEA SP. | 8 |
| OECETIS SP. A | 2 |
| PSYCHOMYIA FLAVI | 10 |
| ZAITZEVIA PARVUL | 16 |
| MICROTENDIPES SP | 36 |
| POLYPEDILUM SP.A | 2 |
| EUKIEFFERIELLA E | 2 |
| EUKIEFFERIELLA F | 2 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS OBU | 6 |
| ANTOCHA SP. | 2 |
| OLIGOCHAETA LUMB | 6 |

| 21B-10H | |
|---|---|
| BAETIS TRICAUDAT | 4 |
| DRUNELLA DODDSI | 2 |
| DRUNELLA GR INGE | 2 |
| EPHEMERELLA INFR | 642 |
| CINYGMULA SP. | 2 |
| HEPTAGENIA SOLIT | 14 |
| RHITHROGENA HAGE | 12 |
| CLAASSENI SABULO | 2 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 2 |
| ISOPERLA FULVA | 12 |
| BRACHYCENTRUS OC | 6 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 112 |
| HYDROPSYCHE OCCI | 90 |
| SYMPHITOPS COCKE | 28 |
| SYMPHITOPS SLOSS | 6 |
| HYDROPTILA SP. | 186 |
| LEPIDOSTOMA SP.A | 2 |
| CERACLEA SP. | 2 |
| OECETIS SP. A | 6 |
| PSYCHOMYIA FLAVI | 22 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 12 |
| MICROTENDIPES SP | 168 |
| CRICOTOPUS SP. B | 2 |
| ORTHOCLADIUS OBU | 4 |
| ABLABESMYIA SP. | 4 |
| OLIGOCHAETA LUMB | 2 |

Table 16. Continued

| 21C-10H | |
|---|---|
| EPHEMERELLA INFR | 694 |
| CINYGMULA SP. | 2 |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 2 |
| PARALEPTOPHL MEM | 14 |
| AMELETUS VELOX | 8 |
| CAPNIA-GROUP SP. | 2 |
| CLAASSENI SABULO | 8 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 10 |
| TAENIONEMA PACIF | 8 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 130 |
| HYDROPSYCHE OCCI | 9[illegible] |
| SYMPHITOPS COCKE | 22 |
| HYDROPTILA SP. | 164 |
| LEPIDOSTOMA SP.A | 2 |
| CERACLEA SP. | 10 |
| PSYCHOMYIA FLAVI | 20 |
| OPTIOSERVUS SPP. | 20 |
| ZAITZEVIA PARVUL | 14 |
| MICROTENDIPES SP | 28 |
| PHAENOPSECTRA SP | 2 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 8 |

| 21D-10H | |
|---|---|
| DRUNELLA GR INGE | 4 |
| EPHEMERELLA INFR | 63[illegible] |
| EPEORUS ALBERTAE | 2 |
| HEPTAGENIA SOLIT | 10 |
| RHITHROGENA HAGE | 2 |
| PARALEPTOPHL MEM | 18 |
| AMELETUS VELOX | 10 |
| CLAASSENI SABULO | 10 |
| ISOGENOIDES ELON | 12 |
| ISOPERLA FULVA | 14 |
| SKWALA PARALLELA | 2 |
| PTERONARCYS CALI | 2 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 12[illegible] |
| HYDROPSYCHE OCCI | 40 |
| SYMPHITOPS COCKE | 26 |
| HYDROPTILA SP. | 12[illegible] |
| LEPIDOSTOMA SP.A | 6 |
| CERACLEA SP. | 6 |
| PSYCHOMYIA FLAVI | 16 |
| ZAITZEVIA PARVUL | 6 |
| MICROTENDIPES SP | 50 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS OBU | 6 |
| OLIGOCHAETA LUMB | 6 |
| TURBELLARI | 2 |

Table 16. Continued

| 23A-10 | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| BAETIS TRICAUDAT | 1 |
| EPHEMERELLA INER | 1 |
| RHITHROGENA HAGE | 1 |
| STENONEMA SP. | 2 |
| AESHNA SP. | 1 |
| CHEUMATOPSYCHE | 1 |
| HYDROPTILA SP. | 12 |
| OXYETHIRA SP. | 1 |
| CERACLEA SP. | 1 |
| POLYCENTROPUS SP | 1 |
| PARARGYRACTIS SP | 2 |
| DUBIRAPHIA SP. | 4 |
| OPTIOSERVUS SPP. | 1 |
| GYRINUS SP. | 2 |
| DICROTENDIP SP.A | 5 |
| MICROPSECTR SP.A | 2 |
| TANYTARSUS SP. B | 2 |
| PAGASTIA SP. | 1 |
| CRICOTOPUS SP. B | 10 |
| EUKIEFFERIELLA F | 3 |
| ORTHOCLADIUS B | 10 |
| ORTHOCLADIUS OBU | 8 |
| PSECTROCLADIUS B | 55 |
| SYNORTHOCLADIUS | 1 |
| WIEDEMANNIA SP. | 1 |
| SIMULIUM SP. | 1 |
| HYALELLA AZTECA | 30 |
| GYRAULUS SP. | 24 |
| LYMNAEA SP. | 3 |
| PHYSA SP. | 9 |
| OLIGOCHAETA | 5 |
| OLIGOCHAETA LUMB | 4 |
| GLOSSIPHONIA SP | 1 |
| TURBELLARI | 87 |

| 23B-10 | |
|---|---|
| BAETIS INSIGNIFI | 7 |
| BAETIS TRICAUDAT | 1 |
| HYDROPTILA SP. | 2 |
| OXYETHIRA SP. | 2 |
| PARARGYRACTIS SP | 1 |
| DICROTENDIP SP.A | 2 |
| POTTHASTIA SP. | 1 |
| CORYNONEURA SP. | 2 |
| CRICOTOPUS SP. B | 13 |
| EUKIEFFERIELLA F | 3 |
| ORTHOCLADIUS B | 13 |
| ORTHOCLADIUS OBU | 9 |
| PSECTROCLADIUS B | 18 |
| SYNORTHOCLADIUS | 1 |
| ABLABESMYIA SP. | 1 |
| SIMULIUM SP. | 2 |
| HYALELLA AZTECA | 10 |
| GYRAULUS SP. | 7 |
| PHYSA SP. | 4 |
| OLIGOCHAETA | 14 |
| GLOSSIPHONIA SP | 1 |
| TURBELLARI | 65 |

Table 16. Continued

| 23C-10 | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| EPHEMERELLA INFR | 1 |
| STENONEMA SP. | 1 |
| HYDROPTILA SP. | 5 |
| OXYETHIRA SP. | 1 |
| PARARGYRACTIS SP | 2 |
| ZAITZEVIA PARVUL | 1 |
| DICROTENDIP SP.A | 3 |
| PAGASTIA SP. | 6 |
| POTTHASTIA SP. | 1 |
| CORYNONEURA SP. | 1 |
| CRICOTOPUS SP. B | 12 |
| EUKIEFFERIELLA F | 6 |
| ORTHOCLADIUS B | 17 |
| ORTHOCLADIUS OBU | 8 |
| PSECTROCLADIUS B | 36 |
| SYNORTHOCLADIUS | 1 |
| WIEDEMANNIA SP. | 1 |
| SIMULIUM SP. | 4 |
| HYALELLA AZTECA | 10 |
| GYRAULUS SP. | 31 |
| LYMNAEA SP. | 2 |
| PHYSA SP. | 13 |
| OLIGOCHAETA | 14 |
| OLIGOCHAETA LUMB | 2 |
| TURBELLARI | 60 |

| 23D-10 | |
|---|---|
| BAETIS INSIGNIFI | 2 |
| BAETIS TRICAUDAT | 1 |
| RHITHROGENA HAGE | 1 |
| CHEUMATOPSYCHE | 1 |
| HYDROPTILA SP. | 5 |
| OXYETHIRA SP. | 1 |
| TRIAENODES SP. | 1 |
| ZAITZEVIA PARVUL | 1 |
| GYRINUS SP. | 2 |
| TANYTARSUS SP. B | 1 |
| DIAMESA SP. B | 1 |
| PAGASTIA SP. | 11 |
| CORYNONEURA SP. | 1 |
| CRICOTOPUS SP. B | 22 |
| EUKIEFFERIELLA F | 6 |
| ORTHOCLADIUS B | 22 |
| ORTHOCLADIUS OBU | 16 |
| PSECTROCLADIUS B | 33 |
| WIEDEMANNIA SP. | 2 |
| SIMULIUM SP. | 2 |
| HYALELLA AZTECA | 3 |
| LEBERTIA SP. | 1 |
| GYRAULUS SP. | 14 |
| LYMNAEA SP. | 4 |
| PHYSA SP. | 11 |
| OLIGOCHAETA | 19 |
| OLIGOCHAETA LUMB | 8 |
| TURBELLARI | 39 |

Table 16. Continued

| 24A-10 | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| EPHEMERELLA INFR | 1 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 4 |
| STENONEMA SP | 34 |
| OPHIOGOMPHUS SP. | 1 |
| CHEUMATOPSYCHE | 15 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | 4 |
| CERACLEA SP. | 2 |
| OECETIS SP. A | [illegible] |
| OPTIOSERVUS SPP. | 1 |
| ZAITZEVIA PARVUL | 1 |
| MICROPSECTR SP.A | 1 |
| MICROTENDIPES SP | 17 |
| TANYTARSUS SP. B | 1 |
| PAGASTIA SP. | 1 |
| CRICOTOPUS SP. B | 23 |
| EUKIEFFERIELLA F | 2 |
| ORTHOCLADIUS B | 7 |
| ORTHOCLADIUS OBU | 18 |
| SIMULIUM SP. | 32 |
| LYMNAEA SP. | 70 |
| OLIGOCHAETA | 2 |
| TURBELLARI | 4 |

| 24B-10 | |
|---|---|
| BAETIS INSIGNIFI | 1 |
| BAETIS TRICAUDAT | 1 |
| EPHEMERELLA INFR | 1 |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 8 |
| STENONEMA SP. | 24 |
| CHEUMATOPSYCHE | 26 |
| HYDROPSYCHE OCCI | 3 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 1 |
| CERACLEA SP. | 2 |
| ZAITZEVIA PARVUL | 2 |
| MICROTENDIPES SP | 9 |
| DIAMESA SP. B | 1 |
| PAGASTIA SP. | 2 |
| CRICOTOPUS SP. B | 58 |
| EUKIEFFERIELLA F | 5 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 13 |
| SYNORTHOCLADIUS | 1 |
| SIMULIUM SP. | 108 |
| LYMNAEA SP. | 61 |
| OLIGOCHAETA LUMB | 1 |
| TURBELLARI | 6 |

| 24C-10 | |
|---|---|
| BAETIS INSIGNIFI | 1 |
| EPHEMERELLA INFR | 4 |
| HEPTAGENIA SOLIT | 1 |
| RHITHROGENA HAGE | 6 |
| STENONEMA SP. | 28 |
| AMELETUS VELOX | 1 |
| GLOSSOSOMA SP. | 1 |
| CHEUMATOPSYCHE | 14 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 6 |
| CERACLEA SP. | 5 |
| OECETIS SP. A | 1 |
| OPTIOSERVUS SPP | 2 |
| ZAITZEVIA PARVUL | 1 |
| MICROTENDIPES SP | 3 |
| DIAMESA SP. B | 2 |
| CRICOTOPUS SP. B | 78 |
| EUKIEFFERIELLA F | 4 |
| ORTHOCLADIUS B | 17 |
| ORTHOCLADIUS OBU | 20 |
| SIMULIUM SP. | 47 |
| LYMNAEA SP. | 52 |
| OLIGOCHAETA LUMB | 5 |
| TURBELLARI | 7 |

| 24D-10 | |
|---|---|
| BAETIS INSIGNIFI | 2 |
| EPHEMERELLA INFR | 1 |
| HEPTAGENIA SOLIT | 5 |
| RHITHROGENA HAGE | 3 |
| STENONEMA SP. | 55 |
| CHEUMATOPSYCHE | 37 |
| HYDROPSYCHE OCCI | 5 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 1 |
| CERACLEA SP. | 18 |
| OECETIS SP. A | 1 |
| ZAITZEVIA PARVUL | 1[illegible] |
| LENZIELLA SP. | 1 |
| MICROPSECTR SP.A | 2 |
| MICROTENDIPES SP | 49 |
| DIAMESA SP. B | 2 |
| CRICOTOPUS SP. B | 36 |
| EUKIEFFERIELLA F | 2 |
| EUKIEFFERIELLA H | 1 |
| ORTHOCLADIUS B | 10 |
| ORTHOCLADIUS OBU | 15 |
| WIEDEMANNIA SP. | 1 |
| SIMULIUM SP. | 70 |
| LYMNAEA SP. | 61 |
| OLIGOCHAETA LUMB | 2 |
| TURBELLARI | 1 |

| 25A-10H | |
|---|---|
| EPHEMERELLA INFR | 4 |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 2 |
| STENONEMA SP. | 306 |
| CHEUMATOPSYCHE | 92 |
| SYMPHITOPS COCKE | 6 |
| HYDROPTILA SP. | 104 |
| CERACLEA SP. | 60 |
| PSYCHOMYIA FLAVI | 28 |
| PARARGYRACTIS SP | 2 |
| ZAITZEVIA PARVUL | 6 |
| DICROTENDIP SP.A | 10 |
| MICROTENDIPES SP | 82 |
| STENOCHIRONOM SP | 2 |
| CRICOTOPUS SP. B | 8 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 30 |
| SYNORTHOCLADIUS | 2 |
| SIMULIUM SP. | 6 |
| SPERCHON SP. | 2 |
| GYRAULUS SP. | 16 |
| LYMNAEA SP. | 12 |
| PHYSA SP. | 4 |
| OLIGOCHAETA LUMB | 4 |
| TURBELLARI | 2 |

| 25B-10H | |
|---|---|
| EPHEMERELLA INFR | 6 |
| HEPTAGENIA SOLIT | 8 |
| STENONEMA SP. | 338 |
| OPHIOGOMPHUS SP. | 2 |
| CHEUMATOPSYCHE | 108 |
| HYDROPSYCHE OCCI | 2 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 50 |
| CERACLEA SP. | 20 |
| PSYCHOMYIA FLAVI | 8 |
| ZAITZEVIA PARVUL | 6 |
| DICROTENDIP SP.A | 2 |
| MICROTENDIPES SP | 52 |
| TANYTARSUS SP. B | 2 |
| DIAMESA SP. B | 2 |
| CRICOTOPUS SP. B | 18 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 42 |
| SYNORTHOCLADIUS | 2 |
| SIMULIUM SP. | 8 |
| GYRAULUS SP. | 24 |
| LYMNAEA SP. | 14 |
| OLIGOCHAETA LUMB | 8 |
| TURBELLARI | 2 |

| 25C-10H | |
|---|---|
| BAETIS INSIGNIFI | 2 |
| EPHEMERELLA INFR | 8 |
| HEPTAGENIA SOLIT | 6 |
| RHITHROGENA HAGE | 2 |
| STENONEMA SP. | 356 |
| OPHIOGOMPHUS SP. | 4 |
| CHEUMATOPSYCHE | 332 |
| HYDROPSYCHE OCCI | 10 |
| SYMPHITOPS COCKE | 6 |
| HYDROPTILA SP. | 126 |
| CERACLEA SP. | 46 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 38 |
| PARARGYRACTIS SP | 8 |
| OPTIOSERVUS SPP | 4 |
| ZAITZEVIA PARVUL | 2 |
| DICROTENDIP SP.A | 10 |
| MICROTENDIPES SP | 60 |
| CRICOTOPUS SP. B | 16 |
| ORTHOCLADIUS B | 10 |
| ORTHOCLADIUS OBU | 48 |
| SIMULIUM SP. | 12 |
| LEBERTIA SP. | 2 |
| FERRISSIA SP. | 8 |
| GYRAULUS SP. | 24 |
| LYMNAEA SP. | 16 |
| PHYSA SP. | 2 |
| OLIGOCHAETA LUMB | 10 |
| TURBELLARI | 2 |

| 25D-10H | |
|---|---|
| BAETIS INSIGNIFI | 4 |
| EPHEMERELLA INFR | 4 |
| HEPTAGENIA SOLIT | 6 |
| STENONEMA SP. | 462 |
| OPHIOGOMPHUS SP. | 2 |
| BRACHYCENTRUS OC | 2 |
| CHEUMATOPSYCHE | 416 |
| HYDROPSYCHE OCCI | 2 |
| SYMPHITOPS COCKE | 10 |
| HYDROPTILA SP. | 62 |
| CERACLEA SP. | 44 |
| OECETIS SP. A | 2 |
| PSYCHOMYIA FLAVI | 14 |
| PARARGYRACTIS SP | 4 |
| ZAITZEVIA PARVUL | 10 |
| DICROTENDIP SP.A | 2 |
| MICROTENDIPES SP | 144 |
| STENOCHIRONOM SP | 4 |
| TANYTARSUS SP. B | 2 |
| CRICOTOPUS SP. B | 18 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 40 |
| SIMULIUM SP. | 34 |
| FERRISSIA SP. | 2 |
| GYRAULUS SP. | 22 |
| LYMNAEA SP. | 18 |
| OLIGOCHAETA LUMB | 6 |
| TURBELLARI | 2 |

Table 16. Continued

| | |
|---|---|
| 27-11 | |
| BAETIS INSIGNIFI | 1 |
| HEPTAGENIA SOLIT | 1 |
| STENONEMA SP. | 11 |
| CHEUMATOPSYCHE | 57 |
| HYDROPSYCHE SP.A | 27 |
| HYDROPSYCHE OCCI | 5 |
| SYMPHITOPS COCKE | 6 |
| HYDROPTILA SP. | 7 |
| ZUMATRICHIA NOTO | 1 |
| CERACLEA SP. | 56 |
| PSYCHOMYIA FLAVI | 9 |
| PARARGYRACTIS SP | 10 |
| ZAITZEVIA PARVUL | 1 |
| MICROTENDIPES SP | 14 |
| STENOCHIRONOM SP | 1 |
| DIAMESA SP. B | 1 |
| CRICOTOPUS SP. [illegible] | 3 |
| ORTHOCLADIUS B | 1 |
| ORTHOCLADIUS OBU | 5 |
| WIEDEMANNIA | 2 |
| FERRISSIA SP. | 1 |
| LYMNAEA SP. | 1 |
| TURBELLARI | 3 |

Table 16. Deep Water Monitoring Stations - Petite Ponar Grab Samples

| 03-1-10 | |
|---|---|
| CHIRONOMUS SP. | 12 |
| PHAENOPSECT SP.B | 1 |
| POLYPEDILUM SP.D | 1 |
| STICTOCHIRONO SP | 1 |
| TANYTARSUS SP. B | 1 |
| EUKIEFFERIELLA 1 | 1 |
| OLIGOCHAETA | 25 |

| 03-2-10 | |
|---|---|
| CHIRONOMUS SP. | 12 |
| PHAENOPSECTRA SP | 1 |
| PHAENOPSECT SP.B | 1 |
| POLYPEDILUM SP.D | 3 |
| STICTOCHIRONO SP | 1 |
| TANYTARSUS SP. B | 1 |
| OLIGOCHAETA | 6 |

| 03-3-10 | |
|---|---|
| CHIRONOMUS SP. | 11 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.D | 1 |
| OLIGOCHAETA | 1 |

| 26-1-10 | |
|---|---|
| CRYPTOCHIRONOMUS | 3 |
| PHAENOPSECT SP.B | 1 |
| ORTHOCLADIUS OBU | 1 |
| PROCLADIUS SP. A | 29 |
| OLIGOCHAETA | 433 |

| 26-2-10 | |
|---|---|
| CERACLEA SP. | 2 |
| PSEUDOCHIRONOMUS | 2 |

| 26-3-10 | |
|---|---|
| CRYPTOCHIRONOMUS | 2 |
| PHAENOPSECT SP.B | 5 |
| POLYPEDILUM SP.D | 13 |
| OLIGOCHAETA | 22 |

| 28A-1-10 | |
|---|---|
| CHIRONOMUS SP. | 19 |
| PROCLADIUS SP. A | 14 |
| OLIGOCHAETA | 225 |

| 28B-1-10 | |
|---|---|
| CHIRONOMUS SP. | 4 |
| PROCLADIUS SP. A | 1 |
| OLIGOCHAETA | 107 |

| 28A-2-10 | |
|---|---|
| CHIRONOMUS SP. | 9 |
| PROCLADIUS SP. A | 15 |
| OLIGOCHAETA | 191 |

| 28B-2-10 | |
|---|---|
| CHIRONOMUS SP. | 7 |
| PROCLADIUS SP. A | 5 |
| OLIGOCHAETA | 112 |

| 28A-3-10 | |
|---|---|
| CHIRONOMUS SP. | 10 |
| PROCLADIUS SP. A | 8 |
| OLIGOCHAETA | 139 |

| 28B-3-10 | |
|---|---|
| CHIRONOMUS SP. | 6 |
| PROCLADIUS SP. A | 4 |
| OLIGOCHAETA | 65 |

Table 16. Continued

| 30-1-10 | |
|---|---|
| OECETIS SP. B | 4 |
| PALPOMY-GP SP. A | 6 |
| CRYPTOCHIRONOMUS | 3 |
| PARACLADOPE SP.B | 6 |
| PARACLADOPE SP.C | 1 |
| PARALAUTERBORNIE | 1 |
| POLYPEDILUM SP.B | 1 |
| POLYPEDILUM SP.D | 23 |
| PSEUDOCHIRONOMUS | 25 |
| PROCLADIUS SP. A | 2 |
| ARRENURUS SP. | 1 |
| OLIGOCHAETA | 22 |

| 30-3-10 | |
|---|---|
| NECTOPSYCHE SP. | 2 |
| OECETIS SP. B | 1 |
| PALPOMY-GP SP. A | 7 |
| CRYPTOCHIRONOMUS | 4 |
| PARACLADOPE SP.B | 4 |
| PARALAUTERBORNIE | 1 |
| POLYPEDILUM SP.B | 2 |
| POLYPEDILUM SP.D | 24 |
| PSEUDOCHIRONOMUS | 22 |
| PROCLADIUS SP. A | 3 |
| PISIDIUM SP. | 1 |
| OLIGOCHAETA | 20 |

| 30-2-10 | |
|---|---|
| OPHIOGOMPHUS SP. | 1 |
| OECETIS SP. B | 2 |
| PALPOMY-GP SP. A | 10 |
| CRYPTOCHIRONOMUS | 6 |
| PARACLADOPE SP.B | 1 |
| PARALAUTERBORNIE | 5 |
| POLYPEDILUM SP.B | 2 |
| POLYPEDILUM SP.D | 32 |
| PSEUDOCHIRONOMUS | 31 |
| PROCLADIUS SP. A | 5 |
| OLIGOCHAETA | 36 |

Table 16. Benthic Macroinvertebrate Sample Counts and Identifications
Spring 1985

Shallow Water Stations - Kick Samples

| 1/A-53 | |
|---|---|
| BAETIS TRICAUDAT | 204 |
| EPHEMERELLA INFR | 568 |
| RHITHROGENA HAGE | 36 |
| CAPNIA-GROUP SP. | 48 |
| ALLOPERLA-GROUP | 8 |
| PROSTOIA BESAMET | 116 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 20 |
| ISOPERLA QUINQUE | 8 |
| TAENIONEMA PACIF | 12 |
| CHEUMATOPSYCHE | 12 |
| HYDROPSYCHE OCCI | 32 |
| HYDROPTILA SP. | 24 |
| LEPIDOSTOMA SP.A | 40 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 12 |
| ATHERIX VARIEGAT | 4 |
| MICROTENDIPES SP | 4 |
| PARACLADOPE SP.B | 4 |
| TANYTARSUS SP. B | 12 |
| DIAMESA SP. B | 24 |
| PAGASTIA SP. | 8 |
| CRICOTOPUS SP. B | 228 |
| EUKIEFFERIELLA B | 56 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA I | 4 |
| ORTHOCLADIUS (EU | 24 |
| ORTHOCLADIUS B | 32 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS OBU | 208 |
| TRISSOCLADIUS SP | 8 |
| SIMULIUM SP. | 4 |
| HEXATOMA SP. | 4 |

| 1/B-53 | |
|---|---|
| BAETIS TRICAUDAT | 296 |
| EPHEMERELLA INFR | 916 |
| RHITHROGENA HAGE | 20 |
| PARALEPTOPHL MEM | 4 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | [illegible] |
| PROSTOIA BESAMET | 116 |
| CULTUS PILATUS | 4 |
| ISOPERLA FULVA | 20 |
| ISOPERLA QUINQUE | 12 |
| SKWALA PARALLELA | [illegible] |
| PTERONARCELLA BA | [illegible] |
| TAENIONEMA PACIF | 4 |
| BRACHYCENTRUS AM | |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 20 |
| HYDROPSYCHE OCCI | 112 |
| HYDROPTILA SP. | 1 |
| LEPIDOSTOMA SP.A | 32 |
| OECETIS SP. A | 8 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 4 |
| ATHERIX VARIEGAT | 8 |
| POLYPEDILUM SP.A | 4 |
| DIAMESA SP. B | 16 |
| CRICOTOPUS SP. B | 180 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA B | 56 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS (EU | 24 |
| ORTHOCLADIUS B | 44 |
| ORTHOCLADIUS OBU | 96 |
| TRISSOCLADIUS SP | 4 |
| SIMULIUM SP. | 40 |

Table 16. Continued

| 1/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 472 |
| EPHEMERELLA INFR | 564 |
| RHITHROGENA HAGE | 72 |
| CAPNIA-GROUP SP. | 96 |
| PROSTOIA BESAMET | 112 |
| CULTUS PILATUS | 16 |
| ISOGENOIDES ELON | 12 |
| ISOPERLA FULVA | 12 |
| ISOPERLA QUINQUE | 28 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 16 |
| BRACHYCENTRUS AM | 8 |
| CHEUMATOPSYCHE | 8 |
| HYDROPSYCHE OCCI | 40 |
| SYMPHITOPS SLOSS | 4 |
| LEPIDOSTOMA SP.A | 8 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 8 |
| PARACLADOPE SP.B | 8 |
| PHAENOPSECTRA SP | 4 |
| TANYTARSUS SP. B | 4 |
| DIAMESA SP. B | 20 |
| CRICOTOPUS SP. B | 196 |
| EUKIEFFERIELLA A | 24 |
| EUKIEFFERIELLA B | 88 |
| EUKIEFFERIELLA E | 12 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS (EU | 32 |
| ORTHOCLADIUS B | 20 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS OBU | 104 |
| SIMULIUM SP. | 12 |
| HEXATOMA SP. | 12 |
| TIPULA SP. | 4 |

| 1/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 180 |
| EPHEMERELLA INFR | 956 |
| RHITHROGENA HAGE | 32 |
| CAPNIA-GROUP SP. | 24 |
| ALLOPERLA-GROUP | 8 |
| PROSTOIA BESAMET | 128 |
| CULTUS PILATUS | 12 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 16 |
| ISOPERLA QUINQUE | 20 |
| PTERONARCELLA BA | 20 |
| TAENIONEMA PACIF | 4 |
| BRACHYCENTRUS AM | 16 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 12 |
| HYDROPSYCHE OCCI | 156 |
| SYMPHITOPS COCKE | 36 |
| SYMPHITOPS SLOSS | 20 |
| HYDROPTILA SP. | 8 |
| LEPIDOSTOMA SP.A | 44 |
| OPTIOSERVUS SPP. | 20 |
| ZAITZEVIA PARVUL | 4 |
| MICROPSECTR SP.A | 8 |
| TANYTARSUS SP. B | 8 |
| DIAMESA SP. B | 20 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 156 |
| EUKIEFFERIELLA A | 24 |
| EUKIEFFERIELLA B | 168 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS (EU | 32 |
| ORTHOCLADIUS B | 40 |
| ORTHOCLADIUS MAL | 12 |
| ORTHOCLADIUS OBU | 172 |
| THIENEMANIELL SP | 4 |

Table 16. Continued

| 27A-53* | |
|---|---|
| CAPNIA-GROUP SP. | 4 |
| ALLOPERLA-GROUP | 64 |
| PROSTOIA BESAMET | 48 |
| CALINEURIA CALIF | 28 |
| CLAASSENI SABULO | 8 |
| CULTUS PILATUS | 28 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 16 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 44 |
| HYDROPSYCHE OCCI | 12 |
| SYMPHITOPS SLOSS | 24 |
| LEPIDOSTOMA SP.A | 16 |
| OECETIS SP. A | 4 |
| MICROPSECTR SP.C | 204 |
| DIAMESA SP. B | 164 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 184 |
| EUKIEFFERIELLA A | 28 |
| EUKIEFFERIELLA B | 36 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS (EU | 92 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 256 |
| ORTHOCLADIUS OBU | 20 |

*Mayflies/misc. counts missing; lost in shipment.

| [illegible] | |
|---|---|
| BAETIS TRICAUDAT | [illegible] |
| EPHEMERELLA INFR | [illegible] |
| EPEORUS ALBERTAE | 4 |
| RHITHROGENA HAGE | [illegible] |
| PARALEPTOPHL HEM | [illegible] |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 20 |
| ALLOPERLA-GROUP | 8 |
| PROSTOIA BESAMET | 44 |
| CALINEURIA CALIF | 12 |
| CLAASSENI SABULO | 4 |
| CULTUS PILATUS | 16 |
| ISOPERLA FULVA | 72 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | [illegible] |
| SYMPHITOPS SLOSS | |
| OPTIOSERVUS SPP. | 4 |
| DIAMESA SP. B | [illegible] |
| CRICOTOPUS SP. B | 100 |
| EUKIEFFERIELLA A | [illegible] |
| EUKIEFFERIELLA B | [illegible] |
| ORTHOCLADIUS (EU | 44 |
| ORTHOCLADIUS MAL | 32 |
| ORTHOCLADIUS OBU | 4 |
| SIMULIUM SP. | 68 |

Table 16. Continued

| 2/C-53* | |
|---|---|
| CAPNIA-GROUP SP. | 12 |
| ALLOPERLA-GROUP | 24 |
| PROSTOIA BESAMET | 48 |
| CLAASSENI SABULO | 4 |
| CULTUS PILATUS | 4 |
| ISOPERLA FULVA | 16 |
| TAENIOMEMA PACIF | 4 |
| CHEUMATOPSYCHE | 4 |
| SYMPHITOPS SLOSS | 4 |
| HYDROPTILA SP. | 24 |
| LEPIDOSTOMA SP.A | 4 |

*Mayflies/misc. and midge counts missing; lost in shipment.

| 2/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 90 |
| CAUDATELLA HYSTR | 8 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 136 |
| EPEORUS ALBERTAE | 4 |
| RHITHROGENA HAGE | 164 |
| PARALEPTOPHL HEM | 12 |
| AMELETUS VELOX | 12 |
| CAPNIA-GROUP SP. | 8 |
| ALLOPERLA-GROUP | 44 |
| PROSTOIA BESAMET | 20 |
| CALINEURIA CALIF | 4 |
| CLAASSENI SABULO | 12 |
| HESPEROPERLA PAC | 4 |
| CULTUS PILATUS | 4 |
| ISOPERLA FULVA | 56 |
| PTERONARCYS CALI | 20 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 8 |
| SYMPHITOPS SLOSS | 48 |
| HYDROPTILA SP. | 4 |
| PSYCHOMYIA FLAVI | 4 |
| OREODYTES SCITIL | 4 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 4 |
| MICROPSECTR SP.C | 32 |
| PHAENOPSECTRA SP | 4 |
| DIAMESA SP. B | 196 |
| CRICOTOPUS SP. B | 192 |
| EUKIEFFERIELLA A | 24 |
| EUKIEFFERIELLA B | 36 |
| ORTHOCLADIUS (EU | 144 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 272 |
| ORTHOCLADIUS OBU | 24 |
| DOLICHOPODIDAE | 4 |
| SIMULIUM SP. | 36 |
| ANTOCHA SP. | 4 |
| HEXATOMA SP. | 8 |

Table 16. Continued

| 4/A-53 | |
|---|---|
| BAETIS TRICAUDAT | 86 |
| EPHEMERELLA INFR | 10 |
| RHITHROGENA HAGE | 2 |
| CAPNIA-GROUP SP. | 88 |
| ISOPERLA FULVA | 8 |
| TAENIONEMA PACIF | 14 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 24 |
| HYDROPSYCHE OCCI | 106 |
| SYMPHITOPS COCKE | 54 |
| SYMPHITOPS SLOSS | 2 |
| HYDROPTILA SP. | 44 |
| PARARGYRACTIS SP | 2 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 6 |
| MICROTENDIPES SP | 20 |
| DIAMESA SP. B | 4 |
| CRICOTOPUS SP. B | 12 |
| EUKIEFFERIELLA A | 6 |
| EUKIEFFERIELLA B | 18 |
| EUKIEFFERIELLA E | 2 |
| EUKIEFFERIELLA F | 2 |
| ORTHOCLADIUS (EU | 8 |
| ORTHOCLADIUS OBU | 14 |
| WIEDEMANNIA SP. | 4 |
| SIMULIUM SP. | 82 |

| 4/B-53 | |
|---|---|
| BAETIS TRICAUDAT | 174 |
| EPHEMERELLA INFR | 10 |
| RHITHROGENA HAGE | 6 |
| PARALEPTOPHL MEN | 2 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 90 |
| ALLOPERLA-GROUP | 2 |
| ISOGENOIDES ELON | 2 |
| ISOPERLA FULVA | 10 |
| PTERONARCELLA BA | 2 |
| TAENIONEMA PACIF | 22 |
| CHEUMATOPSYCHE | 26 |
| HYDROPSYCHE OCCI | 46 |
| SYMPHITOPS COCKE | 10 |
| SYMPHITOP SLOSS | 6 |
| HYDROPTILA SP. | 10 |
| PSYCHOMYIA FLAVI | 18 |
| PARARGYRACTIS SP | 6 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 6 |
| ZAITZEVIA PARVUL | 2 |
| MICROTENDIPES SP | 16 |
| DIAMESA SP. B | 12 |
| CRICOTOPUS SP. B | 30 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS (EU | 10 |
| ORTHOCLADIUS HAL | 2 |
| ORTHOCLADIUS OBU | 32 |
| SIMULIUM SP. | 8 |

Table 16. Continued

| 4/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 84 |
| RHITHROGENA HAGE | 4 |
| CAPNIA-GROUP SP. | 64 |
| ALLOPERLA-GROUP | 8 |
| PROSTOIA BESAMET | 2 |
| ISOPERLA FULVA | 2 |
| TAENIONEMA PACIF | 4 |
| CHEUMATOPSYCHE | 70 |
| HYDROPSYCHE OCCI | 164 |
| SYMPHITOPS COCKE | 22 |
| SYMPHITOPS SLOSS | 10 |
| HYDROPTILA SP. | 116 |
| PSYCHOMYIA FLAVI | 6 |
| OPTIOSERVUS SPP. | 18 |
| MICROTENDIPES SP | 46 |
| PARACLADOPE SP.C | 2 |
| DIAMESA SP. B | 6 |
| CRICOTOPUS SP. B | 24 |
| EUKIEFFERIELLA A | 6 |
| EUKIEFFERIELLA B | 12 |
| ORTHOCLADIUS (EU | 14 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 24 |
| TRISSOCLADIUS SP | 2 |
| SIMULIUM SP. | 48 |

| 4/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 216 |
| EPHEMERELLA INFR | 14 |
| RHITHROGENA HAGE | 10 |
| CAPNIA-GROUP SP. | 126 |
| ALLOPERLA-GROUP | 2 |
| PROSTOIA BESAMET | 2 |
| HESPEROPERLA PAC | 2 |
| CULTUS PILATUS | 2 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 8 |
| PTERONARCELLA BA | 8 |
| PTERONARCYS CALI | 2 |
| TAENIONEMA PACIF | 28 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 20 |
| HYDROPSYCHE OCCI | 60 |
| SYMPHITOPS COCKE | 14 |
| HYDROPTILA SP. | 28 |
| PSYCHOMYIA FLAVI | 14 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 6 |
| MICROTENDIPES SP | 20 |
| DIAMESA SP. B | 24 |
| PAGASTIA SP. | 2 |
| CRICOTOPUS SP. B | 80 |
| EUKIEFFERIELLA B | 22 |
| HETEROTRISSOCLAD | 2 |
| ORTHOCLADIUS (EU | 50 |
| ORTHOCLADIUS OBU | 24 |
| TRISSOCLADIUS SP | 2 |
| SIMULIUM SP. | 22 |

Table 16. Continued

| 5/A-53 | |
|---|---|
| BAETIS TRICAUDAT | 152 |
| EPHEMERELLA INFR | 96 |
| RHITHROGENA HAGE | 38 |
| PARALEPTOPHL MEN | 2 |
| CAPNIA-GROUP SP. | 40 |
| PROSTOIA BESAMET | 10 |
| CULTUS PILATUS | 2 |
| ISOGENOIDES ELON | 10 |
| ISOPERLA FULVA | 36 |
| ISOPERLA QUINQUE | 14 |
| PTERONARCELLA BA | 2 |
| TAENIONEMA PACIF | 36 |
| CHEUMATOPSYCHE | 2 |
| HYDROPSYCHE OCCI | 8 |
| HYDROPTILA SP. | 14 |
| PSYCHOMYIA FLAVI | 8 |
| TANYTARSUS SP. B | 2 |
| DIAMESA SP. B | 6 |
| CRICOTOPUS SP. B | 26 |
| EUKIEFFERIELLA A | 6 |
| EUKIEFFERIELLA B | 8 |
| EUKIEFFERIELLA E | 4 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS (EU | 14 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 20 |
| SIMULIUM SP. | 6 |

| 5/B-53 | |
|---|---|
| BAETIS TRICAUDAT | 238 |
| EPHEMERELLA INFR | 84 |
| RHITHROGENA HAGE | [illegible] |
| PARALEPTOPHL MEM | 6 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 94 |
| ALLOPERLA-GROUP | 2 |
| PROSTOIA BESAMET | 2 |
| CULTUS PILATUS | 4 |
| ISOPERLA FULVA | 10 |
| ISOPERLA QUINQUE | [illegible] |
| TAENIONEMA PACIF | 76 |
| CHEUMATOPSYCHE | [illegible] |
| HYDROPSYCHE OCCI | [illegible] |
| HYDROPTILA SP. | [illegible] |
| OPTIOSERVUS SPP. | 2 |
| CRICOTOPUS SP B | [illegible] |
| EUKIEFFERIELLA B | 8 |
| ORTHOCLADIUS (EU | [illegible] |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS OBU | 4 |
| SIMULIUM SP. | 74 |
| OLIGOCHAETA | 2 |

Table 16. Continued

| 57C-53 | |
|---|---|
| BAETIS TRICAUDAT | 158 |
| EPHEMERELLA INFR | 90 |
| RHITHROGENA HAGE | 28 |
| PARALEPTOPHL MEM | 8 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 88 |
| ALLOPERLA-GROUP | 4 |
| PROSTOIA BESAMET | 2 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 2 |
| ISOPERLA FULVA | 12 |
| ISOPERLA QUINQUE | 34 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 2 |
| TAENIONEMA PACIF | 42 |
| CHEUMATOPSYCHE | 10 |
| HYDROPSYCHE OCCI | 38 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 10 |
| PSYCHOMYIA FLAVI | 2 |
| ZAITZEVIA PARVUL | 4 |
| DIAMESA SP. B | 6 |
| PAGASTIA SP. | 2 |
| CRICOTOPUS SP. B | 42 |
| EUKIEFFERIELLA A | 2 |
| EUKIEFFERIELLA B | 24 |
| HETEROTRISSOCLAD | 2 |
| ORTHOCLADIUS (EU | 12 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS OBU | 42 |
| ABLABESMYIA SP. | 2 |
| DOLICHOPODIDAE | 2 |
| SIMULIUM SP. | 12 |
| OLIGOCHAETA | 4 |

| 57D-53 | |
|---|---|
| BAETIS TRICAUDAT | 146 |
| EPHEMERELLA INFR | 134 |
| RHITHROGENA HAGE | 64 |
| PARALEPTOPHL MEM | 2 |
| AMELETUS VELOX | 2 |
| CAPNIA-GROUP SP. | 64 |
| PROSTOIA BESAMET | 4 |
| CULTUS PILATUS | 8 |
| ISOPERLA FULVA | 26 |
| ISOPERLA QUINQUE | 20 |
| TAENIONEMA PACIF | 52 |
| CHEUMATOPSYCHE | 2 |
| HYDROPSYCHE OCCI | 24 |
| HYDROPTILA SP. | 6 |
| OPTIOSERVUS SPP. | 2 |
| CRICOTOPUS SP. B | 18 |
| EUKIEFFERIELLA B | 18 |
| ORTHOCLADIUS (EU | 12 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 14 |
| SIMULIUM SP. | 2 |

Table 16. Continued

| 67A-53 | |
|---|---|
| BAETIS TRICAUDAT | 32 |
| EPHEMERELLA INFR | 270 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 10 |
| AMELETUS VELOX | 6 |
| CAPNIA-GROUP SP. | 74 |
| CULTUS PILATUS | 6 |
| ISOPERLA FULVA | 16 |
| TAENIONEMA PACIF | 2 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 88 |
| HYDROPSYCHE OCCI | 20 |
| SYMPHITOPS COCKE | 16 |
| SYMPHITOPS SLOSS | 2 |
| HYDROPTILA SP. | 10 |
| OECETIS SP. A | 8 |
| PSYCHOMYIA FLAVI | 28 |
| PARARGYRACTIS SP | 8 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 12 |
| MICROTENDIPES SP | 14 |
| TANYTARSUS SP. B | 10 |
| PAGASTIA SP. | 2 |
| CRICOTOPUS SP. B | 30 |
| EUKIEFFERIELLA A | 6 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS (EU | 24 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 18 |
| CHELIFERA SP. | 2 |
| SIMULIUM SP. | 2 |

| 67B-53 | |
|---|---|
| BAETIS TRICAUDAT | [illegible] |
| EPHEMERELLA INFR | 264 |
| RHITHROGENA HAGE | [illegible] |
| AMELETUS VELOX | 16 |
| CAPNIA-GROUP SP. | 16 |
| PROSTOIA BESAMET | 2 |
| CULTUS PILATUS | 14 |
| ISOGENOIDES ELON | 2 |
| ISOPERLA FULVA | 2 |
| ISOPERLA QUTHOUF | |
| TAENIONEMA PACIF | [illegible] |
| CHEUMATOPSYCHE | 56 |
| HYDROPSYCHE OCCI | |
| SYMPHITOPS COCKE | 12 |
| HYDROPTILA SP. | 54 |
| OECETIS SP. A | 20 |
| PSYCHOMYIA FLAVI | 42 |
| PARARGYRACTIS SP | 12 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 4 |
| MICROTENDIPES SP | 16 |
| PHAENOPSECTRA SP | 2 |
| TANYTARSUS SP. B | 12 |
| DIAMESA SP. B | 2 |
| PAGASTIA SP. | 10 |
| CRICOTOPUS SP. B | 26 |
| EUKIEFFERIELLA A | 2 |
| EUKIEFFERIELLA B | 6 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS (EU | 12 |
| ORTHOCLADIUS B | 10 |
| ORTHOCLADIUS OBU | [illegible] |

Table 16. Continued

| 6/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 40 |
| EPHEMERELLA INFR | 308 |
| RHITHROGENA HAGE | 32 |
| PARALEPTOPHL MEM | 2 |
| AMELETUS VELOX | 12 |
| CAPNIA-GROUP SP. | 62 |
| PROSTOIA BESAMET | 4 |
| CALINEURIA CALIF | 2 |
| CULTUS PILATUS | 10 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 8 |
| ISOPERLA QUINQUE | 14 |
| SKWALA PARALLELA | 2 |
| TAENIONEMA PACIF | 2 |
| CHEUMATOPSYCHE | 110 |
| HYDROPSYCHE OCCI | 12 |
| SYMPHITOPS COCKE | 8 |
| HYDROPTILA SP. | 44 |
| OECETIS SP. A | 20 |
| PSYCHOMYIA FLAVI | 44 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 16 |
| MICROTENDIPES SP | 18 |
| PHAENOPSECTRA SP | 2 |
| TANYTARSUS SP. B | 20 |
| PAGASTIA SP. | 6 |
| CRICOTOPUS SP. B | 62 |
| EUKIEFFERIELLA A | 6 |
| ORTHOCLADIUS (EU | 22 |
| ORTHOCLADIUS B | 18 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 58 |

| 6/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 26 |
| EPHEMERELLA INFR | 268 |
| HEPTAGENIA SOLIT | 6 |
| RHITHROGENA HAGE | 16 |
| PARALEPTOPHL MEM | 2 |
| CAPNIA-GROUP SP. | 12 |
| PROSTOIA BESAMET | 2 |
| CULTUS PILATUS | 10 |
| ISOPERLA QUINQUE | 14 |
| TAENIONEMA PACIF | 2 |
| CHEUMATOPSYCHE | 74 |
| HYDROPSYCHE OCCI | 26 |
| SYMPHITOPS COCKE | 14 |
| HYDROPTILA SP. | 24 |
| ZUMATRICHIA NOTO | 4 |
| OECETIS SP. A | 24 |
| PSYCHOMYIA FLAVI | 66 |
| PARARGYRACTIS SP | 10 |
| ZAITZEVIA PARVUL | 8 |
| MICROTENDIPES SP | 42 |
| POLYPEDILUM SP.A | 2 |
| TANYTARSUS SP. B | 20 |
| DIAMESA SP. B | 2 |
| PAGASTIA SP. | 8 |
| CRICOTOPUS SP. B | 96 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 12 |
| EUKIEFFERIELLA E | 2 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS (EU | 44 |
| ORTHOCLADIUS B | 20 |
| ORTHOCLADIUS MAL | 10 |
| ORTHOCLADIUS OBU | 64 |
| SIMULIUM SP. | 4 |

Table 16. Continued

| | | | |
|---|---|---|---|
| 87A-53 | | 87B-53 | |
| BAETIS TRICAUDAT | 84 | BAETIS TRICAUDAT | 16 |
| EPHEMERELLA INFR | 836 | EPHEMERELLA INFR | 420 |
| RHITHROGENA HAGE | 48 | EPEORUS ALBERTAE | [illegible] |
| PARALEPTOPHL MEM | 4 | RHITHROGENA HAGE | 8 |
| AMELETUS VELOX | 12 | AMELETUS VELOX | 4 |
| PROSTOIA BESAMET | 16 | CAPNIA-GROUP SP. | 4 |
| CULTUS PILATUS | 20 | CULTUS PILATUS | 12 |
| ISOPERLA FULVA | 56 | ISOPERLA FULVA | [illegible] |
| ISOPERLA QUINQUE | 28 | ISOPERLA QUINQUE | 12 |
| SKWALA PARALLELA | 4 | PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 20 | ARCTOPSYCHE GRAN | [illegible] |
| ARCTOPSYCHE GRAN | 8 | CHEUMATOPSYCHE | [illegible] |
| CHEUMATOPSYCHE | 36 | HYDROPSYCHE OCCI | [illegible] |
| HYDROPSYCHE OCCI | 92 | SYMPHITOPS COCKE | 12 |
| SYMPHITOPS COCKE | 48 | HYDROPTILA SP. | 4 |
| SYMPHITOPS SLOSS | 4 | PSYCHOMYIA FLAVI | 4 |
| HYDROPTILA SP. | 16 | RHYACOPHILA BIFI | 4 |
| PSYCHOMYIA FLAVI | 12 | PARARGYRACTIS SP | 16 |
| OPTIOSERVUS SPP. | 12 | OPTIOSERVUS SPP. | [illegible] |
| MICROTENDIPES SP | 4 | MICROPSECTR SP.A | [illegible] |
| TANYTARSUS SP. B | 20 | MICROTENDIPES SP | 32 |
| DIAMESA SP. B | 24 | POLYPEDILUM SP.A | [illegible] |
| PAGASTIA SP. | 8 | TANYTARSUS SP. B | 4 |
| BRILLIA SP. | 4 | DIAMESA SP. B | 4 |
| CRICOTOPUS SP. B | 456 | CRICOTOPUS SP. B | 152 |
| EUKIEFFERIELLA A | 60 | EUKIEFFERIELLA A | 32 |
| EUKIEFFERIELLA B | 60 | EUKIEFFERIELLA B | 60 |
| EUKIEFFERIELLA E | 4 | ORTHOCLADIUS (EU | [illegible] |
| ORTHOCLADIUS (EU | 80 | ORTHOCLADIUS B | 48 |
| ORTHOCLADIUS B | 116 | ORTHOCLADIUS MAL | 12 |
| ORTHOCLADIUS MAL | 40 | ORTHOCLADIUS OBU | 32 |
| ORTHOCLADIUS OBU | 44 | WIEDEMANNIA SP. | 4 |
| ABLABESMYIA SP. | 4 | PACIFASTICUS SP. | 4 |
| SIMULIUM SP. | 12 | OLIGOCHAETA | 112 |
| OLIGOCHAETA | 140 | OLIGOCHAETA LUMB | 12 |
| OLIGOCHAETA LUMB | 8 | | |

Table 16. Continued

| 87C-53 | |
|---|---|
| BAETIS TRICAUDAT | 36 |
| EPHEMERELLA INFR | 588 |
| RHITHROGENA HAGE | 44 |
| AMELETUS VELOX | 4 |
| PROSTOIA BESAMET | 8 |
| CULTUS PILATUS | 24 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 36 |
| ISOPERLA QUINQUE | 24 |
| PTERONARCELLA BA | 4 |
| TAENIONEMA PACIF | 12 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 24 |
| HYDROPSYCHE OCCI | 36 |
| SYMPHITOPS COCKE | 12 |
| HYDROPTILA SP. | 16 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 4 |
| PARARGYRACTIS SP | 16 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 4 |
| MICROTENDIP SP.C | 4 |
| MICROTENDIPES SP | 12 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 16 |
| TANYTARSUS SP. B | 32 |
| DIAMESA SP. B | 44 |
| PAGASTIA SP. | 8 |
| CRICOTOPUS SP. B | 496 |
| EUKIEFFERIELLA A | 44 |
| EUKIEFFERIELLA B | 108 |
| EUKIEFFERIELLA E | 12 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS (EU | 176 |
| ORTHOCLADIUS B | 116 |
| ORTHOCLADIUS MAL | 24 |
| ORTHOCLADIUS OBU | 100 |
| ABLABESMYIA SP. | 4 |
| CHELIFERA SP. | 4 |
| SIMULIUM SP. | 4 |
| OLIGOCHAETA | 124 |
| OLIGOCHAETA LUMB | 4 |

| 87D-53 | |
|---|---|
| BAETIS TRICAUDAT | 148 |
| EPHEMERELLA INFR | 612 |
| RHITHROGENA HAGE | 16 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 4 |
| PROSTOIA BESAMET | 16 |
| CULTUS PILATUS | 16 |
| ISOPERLA FULVA | 16 |
| ISOPERLA QUINQUE | 20 |
| TAENIONEMA PACIF | 12 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 40 |
| HYDROPSYCHE OCCI | 136 |
| SYMPHITOPS COCKE | 56 |
| HYDROPTILA SP. | 20 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 12 |
| PARARGYRACTIS SP | 8 |
| ZAITZEVIA PARVUL | 4 |
| MICROTENDIPES SP | [illegible] |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 12 |
| TANYTARSUS SP. B | 24 |
| DIAMESA SP. B | 68 |
| CRICOTOPUS SP. B | 508 |
| EUKIEFFERIELLA A | 112 |
| EUKIEFFERIELLA B | 116 |
| EUKIEFFERIELLA E | 4 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS (EU | 120 |
| ORTHOCLADIUS B | 96 |
| ORTHOCLADIUS MAL | 44 |
| ORTHOCLADIUS OBU | 76 |
| ABLABESMYIA SP. | 8 |
| SIMULIUM SP. | 32 |
| OLIGOCHAETA | 76 |
| OLIGOCHAETA LUMB | 4 |

Table 16. Continued

| 9/A-53 | |
|---|---|
| BAETIS TRICAUDAT | 82 |
| EPHEMERELLA INFR | 176 |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 26 |
| PARALEPTOPHL MEM | 2 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 96 |
| PROSTOIA BESAMET | 4 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 32 |
| ISOPERLA QUINQUE | 12 |
| TAENIONEMA PACIF | 10 |
| CHEUMATOPSYCHE | 26 |
| HYDROPSYCHE OCCI | 12 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 40 |
| PSYCHOMYIA FLAVI | 24 |
| ZAITZEVIA PARVUL | 2 |
| MICROTENDIPES SP | 2 |
| TANYTARSUS SP. B | 102 |
| DIAMESA SP. B | 16 |
| CRICOTOPUS SP. B | 148 |
| EUKIEFFERIELLA A | 2 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS (EU | 66 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS OBU | 30 |
| ABLABESMYIA SP. | 2 |

| 9/B-53 | |
|---|---|
| BAETIS TRICAUDAT | 30 |
| EPHEMERELLA INFR | 7[illegible] |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 10 |
| PARALEPTOPHL MEM | 8 |
| CAPNIA-GROUP SP. | 102 |
| ISOGENOIDES ELON | [illegible] |
| ISOPERLA FULVA | 6 |
| ISOPERLA QUINQUE | 6 |
| SKWALA PARALLELA | 4 |
| TAENIONEMA PACIF | 10 |
| CHEUMATOPSYCHE | 8 |
| HYDROPSYCHE OCCI | 10 |
| HYDROPTILA SP. | [illegible] |
| OECETIS SP. A | 10 |
| PSYCHOMYIA FLAVI | 16 |
| MICROTENDIPES SP | [illegible] |
| TANYTARSUS SP. B | [illegible] |
| DIAMESA SP. B | |
| CRICOTOPUS SP. B | 62 |
| EUKIEFFERIELLA A | [illegible] |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA C | [illegible] |
| ORTHOCLADIUS (EU | [illegible] |
| ORTHOCLADIUS B | [illegible] |
| ORTHOCLADIUS OBU | 34 |
| SIMULIUM SP. | 4 |

Table 16. Continued

| 9/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 262 |
| EPHEMERELLA INFR | 298 |
| RHITHROGENA HAGE | 74 |
| PARALEPTOPHL MEH | 4 |
| AMELETUS VELOX | 6 |
| CAPNIA-GROUP SP. | 102 |
| ALLOPERLA-GROUP | 2 |
| PROSTOIA BESAMET | 22 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 14 |
| ISOPERLA FULVA | 32 |
| ISOPERLA QUINQUE | 16 |
| TAENIONEMA PACIF | 42 |
| CHEUMATOPSYCHE | 8 |
| HYDROPSYCHE OCCI | 14 |
| HYDROPTILA SP. | 42 |
| PSYCHOMYIA FLAVI | 16 |
| ZAITZEVIA PARVUL | 2 |
| MICROTENDIPES SP | 6 |
| TANYTARSUS SP. B | 136 |
| DIAMESA SP. B | 50 |
| CRICOTOPUS SP. B | 324 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 18 |
| ORTHOCLADIUS (EU | 134 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 62 |
| SIMULIUM SP. | 4 |

| 9/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 72 |
| EPHEMERELLA INFR | 88 |
| RHITHROGENA HAGE | 14 |
| PARALEPTOPHIL MEH | 6 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 136 |
| PROSTOIA BESAMET | 4 |
| CALINEURIA CALIF | 2 |
| CULTUS PILATUS | 2 |
| ISOGENOIDES ELON | 2 |
| ISOPERLA FULVA | 2 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 4 |
| CHEUMATOPSYCHE | 18 |
| HYDROPSYCHE OCCI | 22 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 128 |
| OECETIS SP. A | 26 |
| PSYCHOMYIA FLAVI | 30 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 4 |
| MICROTENDIPES SP | 4 |
| PARACLADOPE SP.B | 2 |
| TANYTARSUS SP. B | 138 |
| DIAMESA SP. B | 24 |
| CRICOTOPUS SP. B | 113 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 12 |
| HETEROTRISSOCLAD | 2 |
| ORTHOCLADIUS (EU | 30 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 36 |
| PHYSA SP. | 2 |

Table 16. Continued

| | | | |
|---|---|---|---|
| 10/A-53 | | 10/B-53 | |
| BAETIS TRICAUDAT | 124 | BAETIS TRICAUDAT | 408 |
| EPHEMERELLA INFR | 940 | CAUDATELLA HYSTR | 4 |
| EPEORUS ALBERTAE | 8 | EPHEMERELLA INFR | 1000 |
| RHITHROGENA HAGE | 720 | PARALEPTOPHL. MEM | 12 |
| PARALEPTOPHL. MEM | 32 | CAPNIA-GROUP SP. | 4 |
| CAPNIA GROUP SP. | 52 | PROSTOIA BESAMET | 4 |
| PROSTOIA BESAMET | 4 | CLAASSENI SABULO | 10 |
| CULTUS PILATUS | 4 | CULTUS PILATUS | [illegible] |
| ISOPERLA FULVA | 20 | ISOGENOIDES FLOR | 4 |
| ISOPERLA QUINQUE | 44 | ISOPERLA FULVA | [illegible] |
| PTERONARCELLA BA | 16 | ISOPERLA QUINQUE | [illegible] |
| TAENIONEMA PACIF | 72 | PTERONARCELLA BA | [illegible] |
| ARCTOPSYCHE GRAN | 4 | TAENIONEMA PACIF | 200 |
| CHEUMATOPSYCHE | 16 | PROTOPTIL. SP. | 4 |
| HYDROPSYCHE OCCI | 48 | ARCTOPSYCHE GRAN | 4 |
| SYMPHITOPS COCKE | 12 | CHEUMATOPSYCHE | [illegible] |
| HYDROPTILA SP. | 24 | HYDROPSYCHE OCCI | 200 |
| OECETIS SP. A | 4 | SYMPHITOPS COCKE | [illegible] |
| PARARGYRACTIS SP | 4 | HYDROPTILA SP. | [illegible] |
| OPTIOSERVUS SPP. | 60 | ZUMATRICHIA NOTO | 4 |
| ZAITZEVIA PARVUL | 24 | PSYCHOMYIA FLAVI | [illegible] |
| POLYPEDILUM SP.A | 4 | PARARGYRACTIS SP | 4 |
| TANYTARSUS SP. B | 8 | OPTIOSERVUS SPP. | 156 |
| DIAMESA SP. B | 16 | ZAITZEVIA PARVUL | 32 |
| PAGASTIA SP. | 12 | ATHERIX VARIEGAT | 4 |
| CRICOTOPUS SP. B | 88 | MICROPSECTR SP.A | 8 |
| EUKIEFFERIELLA A | 28 | TANYTARSUS SP. B | 64 |
| EUKIEFFERIELLA B | 52 | DIAMESA SP. B | 12 |
| EUKIEFFERIELLA E | 60 | PAGASTIA SP. | 56 |
| ORTHOCLADIUS (EU | 48 | CRICOTOPUS SP. B | 84 |
| ORTHOCLADIUS B | 12 | EUKIEFFERIELLA A | 52 |
| ORTHOCLADIUS MAL | 48 | EUKIEFFERIELLA B | 80 |
| ORTHOCLADIUS OBU | 28 | EUKIEFFERIELLA E | 64 |
| THIENEMANIELL SP | 4 | EUKIEFFERIELLA F | 16 |
| DOLICHOPODIDAE | 8 | ORTHOCLADIUS (EU | 20 |
| WIEDEMANNIA SP. | 12 | ORTHOCLADIUS B | 8 |
| SIMULIUM SP. | 556 | ORTHOCLADIUS MAL | 100 |
| ANTOCHA SP. | 12 | ORTHOCLADIUS OBU | 20 |
| | | CHELIFERA SP. | 4 |
| | | WIEDEMANNIA SP. | 4 |
| | | SIMULIUM SP. | 320 |
| | | ANTOCHA SP. | 4 |
| | | TURBELLARI | [illegible] |

Table 16. Continued

| 10/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 68 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 820 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 324 |
| PARALEPTOPHL MEM | 36 |
| CAPNIA-GROUP SP. | 4 |
| CULTUS PILATUS | 20 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 8 |
| TAENIONEMA PACIF | 68 |
| CHEUMATOPSYCHE | 44 |
| HYDROPSYCHE OCCI | 28 |
| SYMPHITOPS COCKE | 8 |
| HYDROPTILA SP. | 92 |
| ZUMATRICHIA NOTO | 4 |
| PARARGYRACTIS SP | 12 |
| OPTIOSERVUS SPP. | 44 |
| ZAITZEVIA PARVUL | 12 |
| ATHERIX VARIEGAT | 4 |
| TANYTARSUS SP. B | 16 |
| DIAMESA SP. B | 4 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 16 |
| EUKIEFFERIELLA A | 20 |
| EUKIEFFERIELLA B | 16 |
| EUKIEFFERIELLA E | 16 |
| ORTHOCLADIUS (EU | 12 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS MAL | 16 |
| ORTHOCLADIUS OBU | 24 |
| ABLABESMYIA SP. | 4 |
| WIEDEMANNIA SP. | 4 |
| SIMULIUM SP. | 1152 |
| ANTOCHA SP. | 8 |
| OLIGOCHAETA LUMB | 4 |

| 10/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 160 |
| EPHEMERELLA INFR | 548 |
| EPEORUS ALBERTAE | 8 |
| RHITHROGENA HAGE | 784 |
| PARALEPTOPHL MEM | 24 |
| CAPNIA-GROUP SP. | 72 |
| PROSTOIA BESAMET | 4 |
| CLAASSENI SABULO | 12 |
| HESPEROPERLA PAC | 4 |
| CULTUS PILATUS | 32 |
| ISOPERLA FULVA | 28 |
| ISOPERLA QUINQUE | 16 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 16 |
| TAENIONEMA PACIF | 68 |
| CHEUMATOPSYCHE | 40 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | 12 |
| HYDROPTILA SP. | 168 |
| LEPIDOSTOMA SP.A | 8 |
| PSYCHOMYIA FLAVI | 4 |
| PARARGYRACTIS SP | 16 |
| OPTIOSERVUS SPP. | 56 |
| ZAITZEVIA PARVUL | 20 |
| ATHERIX VARIEGAT | 4 |
| MICROPSECTR SP.A | 12 |
| TANYTARSUS SP. B | 72 |
| DIAMESA SP. B | 12 |
| PAGASTIA SP. | 24 |
| CRICOTOPUS SP. B | 96 |
| EUKIEFFERIELLA A | 28 |
| EUKIEFFERIELLA B | 52 |
| EUKIEFFERIELLA E | 36 |
| EUKIEFFERIELLA F | 12 |
| ORTHOCLADIUS (EU | 64 |
| ORTHOCLADIUS MAL | 108 |
| ORTHOCLADIUS OBU | 92 |
| TRISSOCLADIUS SP | 12 |
| SYNORTHOCLADIUS | 4 |
| WIEDEMANNIA SP. | 20 |
| SIMULIUM SP. | 236 |
| ANTOCHA SP. | 36 |

Table 16. Continued

11/A-53

| | |
|---|---|
| BAETIS TRICAUDAT | 104 |
| EPHEMERELLA INFR | 143 |
| RHITHROGENA HAGE | 36 |
| PARALEPTOPHL MEM | 4 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 8 |
| ISOPERLA QUINQUE | 12 |
| TAENIONEMA PACIF | 60 |
| CHEUMATOPSYCHE | 8 |
| HYDROPSYCHE OCCI | 24 |
| HYDROPTILA SP. | 32 |
| OPTIOSERVUS SPP. | 4 |
| PHAENOPSECTRA SP | 4 |
| TANYTARSUS SP. B | 8 |
| DIAMESA SP. B | 12 |
| CRICOTOPUS SP. B | 144 |
| EUKIEFFERIELLA A | 16 |
| EUKIEFFERIELLA B | 28 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS (EU | 28 |
| ORTHOCLADIUS B | 108 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS OBU | 360 |
| SIMULIUM SP. | 12 |

11/B-53

| | |
|---|---|
| BAETIS TRICAUDAT | 404 |
| EPHEMERELLA INFR | 260 |
| RHITHROGENA HAGE | 20 |
| PARALEPTOPHL MEM | 8 |
| CAPNIA-GROUP SP. | [illegible] |
| PROSTOIA BESAMET | 8 |
| CULTUS PILATUS | 12 |
| ISOPERLA FULVA | 24 |
| ISOPERLA QUINQUE | 12 |
| PTERONARCELLA BA | 4 |
| TAENIONEMA PACIF | 124 |
| CHEUMATOPSYCHE | 12 |
| HYDROPSYCHE OCCI | 12 |
| HYDROPTILA SP. | 32 |
| PARACLADOPE SP.B | 4 |
| TANYTARSUS SP. B | 4 |
| DIAMESA SP. B | 12 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 116 |
| EUKIEFFERIELLA B | 32 |
| EUKIEFFERIELLA E | 16 |
| HETEROTRISSOCLAD | 8 |
| ORTHOCLADIUS (EU | 128 |
| ORTHOCLADIUS B | 124 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS OBU | 356 |
| SIMULIUM SP. | 188 |

11/C-53

| | |
|---|---|
| BAETIS TRICAUDAT | 312 |
| EPHEMERELLA INFR | 276 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 104 |
| PARALEPTOPHL MEM | 4 |
| ALLOPERLA-GROUP | 4 |
| CULTUS PILATUS | 16 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 68 |
| ISOPERLA QUINQUE | 16 |
| PTERONARCELLA BA | 12 |
| TAENIONEMA PACIF | 208 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 8 |
| HYDROPTILA SP. | 32 |
| PARACLADOPE SP.B | 4 |
| TANYTARSUS SP. B | 8 |
| DIAMESA SP. B | 12 |
| PAGASTIA SP. | 8 |
| BRILLIA SP. | 4 |
| CRICOTOPUS SP. B | 88 |
| EUKIEFFERIELLA B | 20 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS (EU | 56 |
| ORTHOCLADIUS B | 184 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS OBU | 224 |
| WIEDEMANNIA SP. | 8 |
| SIMULIUM SP. | 132 |

11/D-53

| | |
|---|---|
| BAETIS TRICAUDAT | 300 |
| EPHEMERELLA INFR | 216 |
| RHITHROGENA HAGE | 4 |
| PARALEPTOPHL MEM | 4 |
| CAPNIA-GROUP SP. | 24 |
| ISOPERLA FULVA | 4 |
| ISOPERLA QUINQUE | 12 |
| TAENIONEMA PACIF | 56 |
| HYDROPSYCHE OCCI | 20 |
| HYDROPTILA SP. | 24 |
| PHAENOPSECTRA SP | 4 |
| TANYTARSUS SP. B | 8 |
| DIAMESA SP. B | 4 |
| CRICOTOPUS SP. B | 84 |
| EUKIEFFERIELLA B | 24 |
| ORTHOCLADIUS (EU | 104 |
| ORTHOCLADIUS B | 72 |
| ORTHOCLADIUS OBU | 336 |
| SIMULIUM SP. | 136 |

Table 16. Continued

| 13/A-53 | | 13/B-53 | |
|---|---|---|---|
| BAETIS TRICAUDAT | 2 | BAETIS TRICAUDAT | 22 |
| EPHEMERELLA INFR | 112 | EPHEMERELLA INFR | 88 |
| HEPTAGENIA SOLIT | 2 | RHITHROGENA HAGE | 18 |
| RHITHROGENA HAGE | 2 | PARALEPTOPHL MEM | 2 |
| CAPNIA-GROUP SP. | 12 | AMELETUS VELOX | 2 |
| CLAASSENI SABULO | 2 | CAPNIA-GROUP SP. | 14 |
| CULTUS PILATUS | 8 | CLAASSENI SABULO | 2 |
| PTERONARCELLA BA | 2 | CULTUS PILATUS | 6 |
| TAENIONEMA PACIF | 2 | ISOGENOIDES ELON | 6 |
| HYDROPSYCHE OCCI | 6 | ISOPERLA FULVA | 10 |
| HYDROPTILA SP. | 38 | ISOPERLA QUINQUE | 8 |
| OECETIS SP. A | 4 | SKWALA PARALLELA | 2 |
| ZAITZEVIA PARVUL | 2 | PTERONARCELLA BA | 2 |
| CRYPTOCHIRONOMUS | 2 | TAENIONEMA PACIF | 6 |
| MICROTENDIPES SP | 48 | CHEUMATOPSYCHE | 8 |
| PARACLADOPE SP.B | 14 | HYDROPSYCHE OCCI | 4 |
| PHAENOPSECTRA SP | 18 | SYMPHITOPS COCKE | 2 |
| TANYTARSUS SP. B | 18 | HYDROPTILA SP. | 24 |
| DIAMESA SP. B | 14 | PSYCHOMYIA FLAVI | 2 |
| PAGASTIA SP. | 8 | OREODYTES SCITIL | 2 |
| CRICOTOPUS SP. B | 26 | ZAITZEVIA PARVUL | 6 |
| EUKIEFFERIELLA A | 2 | MICROTENDIPES SP | 6 |
| EUKIEFFERIELLA B | 2 | PARACLADOPE SP.B | 2 |
| EUKIEFFERIELLA E | 2 | PHAENOPSECTRA SP | 6 |
| ORTHOCLADIUS (EU | 4 | TANYTARSUS SP. B | 4 |
| ORTHOCLADIUS B | 2 | DIAMESA SP. B | 4 |
| ORTHOCLADIUS OBU | 218 | CRICOTOPUS SP. B | 30 |
| ABLABESMYIA SP. | 2 | EUKIEFFERIELLA A | 4 |
| WIEDEMANNIA SP. | 2 | EUKIEFFERIELLA B | 8 |
| HEXATOMA SP. | 2 | HETEROTRISSOCLAD | 2 |
| OLIGOCHAETA | 4 | ORTHOCLADIUS (EU | 16 |
| | | ORTHOCLADIUS B | 6 |
| | | ORTHOCLADIUS MAL | 8 |
| | | ORTHOCLADIUS OBU | 154 |
| | | SIMULIUM SP. | 4 |
| | | OLIGOCHAETA | 12 |

Table 16. Continued

| 13/C-53 | | 13/D-53 | |
|---|---|---|---|
| BAETIS TRICAUDAT | 58 | BAETIS TRICAUDAT | 14 |
| EPHEMERELLA INFR | 196 | EPHEMERELLA INFR | 176 |
| RHITHROGENA HAGE | 14 | RHITHROGENA HAGE | 22 |
| PARALEPTOPHL MEM | 4 | PARALEPTOPHL MEM | 6 |
| CAPNIA-GROUP SP. | 10 | CAPNIA-GROUP SP. | 12 |
| CULTUS PILATUS | 14 | ALLOPERLA-GROUP | 2 |
| ISOPERLA FULVA | 4 | CULTUS PILATUS | 6 |
| ISOPERLA QUINQUE | 6 | ISOGENOIDES ELON | 10 |
| PTERONARCELLA BA | 2 | ISOPERLA FULVA | 14 |
| TAENIONEMA PACIF | 20 | ISOPERLA QUINQUE | 6 |
| CHEUMATOPSYCHE | 22 | PTERONARCELLA BA | 4 |
| HYDROPSYCHE OCCI | 26 | TAENIONEMA PACIF | 3 |
| SYMPHITOPS SLOSS | 2 | BRACHYCENTRUS OC | 2 |
| HYDROPTILA SP. | 44 | CHEUMATOPSYCHE | 16 |
| OECETIS SP. A | 2 | HYDROPSYCHE OCCI | 12 |
| OPTIOSERVUS SPP. | 4 | HYDROPTILA SP. | 34 |
| MICROTENDIPES SP | 8 | OPTIOSERVUS SPP. | 2 |
| PARACLADOPE SP.B | 4 | ZAITZEVIA PARVUL | 6 |
| PHAENOPSECTRA SP | 4 | MICROTENDIPES SP | 14 |
| TANYTARSUS SP. B | 8 | PHAENOPSECTRA SP | 6 |
| DIAMESA SP. B | 16 | TANYTARSUS SP. B | 16 |
| PAGASTIA SP. | 4 | DIAMESA SP. B | 8 |
| CRICOTOPUS SP. B | 56 | PAGASTIA SP. | 6 |
| EUKIEFFERIELLA A | 8 | CRICOTOPUS SP. B | 74 |
| EUKIEFFERIELLA B | 16 | EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA E | 6 | EUKIEFFERIELLA B | 16 |
| ORTHOCLADIUS (EU | 40 | EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS B | 16 | ORTHOCLADIUS EU | 26 |
| ORTHOCLADIUS MAL | 12 | ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 196 | ORTHOCLADIUS MAL | 12 |
| ABLABESMYIA SP. | 4 | ORTHOCLADIUS OBU | 206 |
| SIMULIUM SP. | 8 | ABLABESMYIA SP. | 2 |
| HEXATOMA SP. | 4 | HEXATOMA SP. | 8 |

Table 16. Continued

| 14/A-53 | |
|---|---|
| BAETIS TRICAUDAT | 28 |
| CAENIS SIMULANS | 4 |
| EPHEMERELLA INFR | 68 |
| RHITHROGENA HAGE | 20 |
| PARALEPTOPHL MEM | 20 |
| CAPNIA-GROUP SP. | 40 |
| ALLOPERLA-GROUP | 4 |
| ISOGENOIDES ELON | 16 |
| ISOPERLA FULVA | 8 |
| TAENIONEMA PACIF | 4 |
| HYDROPTILA SP. | 48 |
| OECETIS SP. A | 4 |
| ZAITZEVIA PARVUL | 4 |
| MICROTENDIPES SP | 24 |
| PARACLADOPE SP.B | 4 |
| TANYTARSUS SP. B | 4 |
| DIAMESA SP. B | 12 |
| CRICOTOPUS SP. B | 60 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 4 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS (EU | 12 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS OBU | 192 |
| WIEDEMANNIA SP. | 4 |

| 14/B-53 | |
|---|---|
| BAETIS TRICAUDAT | 76 |
| EPHEMERELLA INFR | 28 |
| RHITHROGENA HAGE | 20 |
| CAPNIA-GROUP SP. | 20 |
| SKWALA PARALLELA | 4 |
| TAENIONEMA PACIF | 8 |
| HYDROPSYCHE OCCI | 4 |
| HYDROPTILA SP. | 16 |
| MICROTENDIPES SP | 24 |
| PARACLADOPE SP.B | 4 |
| PARATANYTARSUS | 8 |
| TANYTARSUS SP. B | 4 |
| DIAMESA SP. B | 12 |
| CRICOTOPUS SP. B | 20 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS (EU | 4 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS OBU | 96 |
| WIEDEMANNIA SP. | 4 |
| SIMULIUM SP | 8 |
| OLIGOCHAETA | 8 |

| 14/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 4 |
| CAENIS SIMULANS | 4 |
| EPHEMERELLA INFR | 96 |
| RHITHROGENA HAGE | 12 |
| CAPNIA-GROUP SP. | 32 |
| HESPEROPERLA PAC | 4 |
| CULTUS PILATUS | 4 |
| ISOPERLA FULVA | 8 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 4 |
| TAENIONEMA PACIF | 4 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 16 |
| HYDROPTILA SP. | 44 |
| OECETIS SP. A | 4 |
| MICROTENDIPES SP | 4 |
| PHAENOPSECTRA SP | 4 |
| TANYTARSUS SP. B | 4 |
| DIAMESA SP. B | 12 |
| CRICOTOPUS SP. B | 28 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS (EU | 16 |
| ORTHOCLADIUS B | 16 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS OBU | 212 |
| SIMULIUM SP. | 8 |

| 14/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 20 |
| EPHEMERELLA INFR | 80 |
| RHITHROGENA HAGE | 4 |
| PARALEPTOPHL MEM | 4 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 32 |
| CULTUS PILATUS | 12 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 12 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 4 |
| TAENIONEMA PACIF | 20 |
| HYDROPTILA SP. | 32 |
| PSYCHOMYIA FLAVI | 4 |
| OREODYTES SCITIL | 4 |
| OPTIOSERVUS SPP. | 4 |
| MICROTENDIPES SP | 8 |
| PHAENOPSECTRA SP | 4 |
| TANYTARSUS SP. B | 12 |
| DIAMESA SP. B | 4 |
| CRICOTOPUS SP. B | 20 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 4 |
| HETEROTRISOCLAD | 4 |
| ORTHOCLADIUS (EU | 8 |
| ORTHOCLADIUS B | 16 |
| ORTHOCLADIUS OBU | 260 |
| SIMULIUM SP. | 4 |

Table 16. Continued

| 15/A-53 | |
|---|---|
| BAETIS TRICAUDAT | 88 |
| EPHEMERELLA INFR | 144 |
| RHITHROGENA HAGE | 72 |
| PARALEPTOPHL MEM | 12 |
| CAPNIA-GROUP SP. | 52 |
| CULTUS PILATUS | 12 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 8 |
| ISOPERLA QUINQUE | 12 |
| TAENIONEMA PACIF | 12 |
| CHEUMATOPSYCHE | 20 |
| HYDROPSYCHE OCCI | 8 |
| HYDROPTILA SP. | 124 |
| OECETIS SP. A | 4 |
| OPTIOSERVUS SPP. | 4 |
| PHAENOPSECTRA SP | 4 |
| TANYTARSUS SP. B | 48 |
| DIAMESA SP. B | 48 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 156 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS (EU | 52 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 428 |
| SIMULIUM SP. | 4 |

| 15/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 124 |
| EPHEMERELLA INFR | 124 |
| RHITHROGENA HAGE | 64 |
| PARALEPTOPHL MEM | 32 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 84 |
| CLAASSENI SABULO | 4 |
| CULTUS PILATUS | 28 |
| ISOPERLA FULVA | 20 |
| ISOPERLA QUINQUE | 12 |
| TAENIONEMA PACIF | 12 |
| CHEUMATOPSYCHE | 8 |
| HYDROPSYCHE OCCI | 8 |
| HYDROPTILA SP. | 236 |
| OECETIS SP. A | 8 |
| ZAITZEVIA PARVUL | 4 |
| PARACLADOPE SP.B | 16 |
| PHAENOPSECTRA SP | 24 |
| TANYTARSUS SP. B | 32 |
| DIAMESA SP. B | 64 |
| CRICOTOPUS SP. B | 136 |
| EUKIEFFERIELLA B | 8 |
| EUKIEFFERIELLA E | 4 |
| HETEROTRISSOCLAD | 8 |
| ORTHOCLADIUS EU | 36 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 904 |
| OLIGOCHAETA | 4 |

| 15/B-53 | |
|---|---|
| BAETIS TRICAUDAT | 56 |
| EPHEMERELLA INFR | 308 |
| RHITHROGENA HAGE | 188 |
| PARALEPTOPHL MEM | 12 |
| AMELETUS VELOX | 8 |
| CAPNIA-GROUP SP. | 56 |
| ALLOPERLA-GROUP | 4 |
| CULTUS PILATUS | [illegible] |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 12 |
| ISOPERLA QUINQUE | 12 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 8 |
| TAENIONEMA PACIF | 12 |
| CHEUMATOPSYCHE | 16 |
| HYDROPSYCHE OCCI | 16 |
| HYDROPTILA SP. | 176 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 4 |
| PARACLADOPE SP.B | 12 |
| TANYTARSUS SP. B | 36 |
| DIAMESA SP. B | [illegible] |
| CRICOTOPUS SP. B | 76 |
| EUKIEFFERIELLA A | 4 |
| ORTHOCLADIUS (EU | 92 |
| ORTHOCLADIUS B | 20 |
| ORTHOCLADIUS OBU | 220 |
| ABLABESMYIA SP. | 4 |
| SIMULIUM SP. | 4 |
| HEXATOMA SP. | 8 |
| OLIGOCHAETA | 8 |

| 15/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 68 |
| EPHEMERELLA INFR | 64 |
| RHITHROGENA HAGE | 40 |
| PARALEPTOPHL MEM | 24 |
| AMELETUS VELOX | 8 |
| CAPNIA-GROUP SP. | 188 |
| ISOGENOIDES ELON | 20 |
| ISOPERLA FULVA | 12 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 8 |
| TAENIONEMA PACIF | 12 |
| HYDROPTILA SP. | 100 |
| ZAITZEVIA PARVUL | 4 |
| PARACLADOPE SP.B | 4 |
| PHAENOPSECTRA SP | 8 |
| TANYTARSUS SP. B | 4 |
| DIAMESA SP. B | 44 |
| CRICOTOPUS SP. B | 76 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS (EU | 34 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 544 |

Table 16. Continued

| 19/A-53 | |
|---|---|
| BAETIS TRICAUDAT | 140 |
| EPHEMERELLA INFR | 130 |
| HEPTAGENIA SOLIT | 8 |
| RHITHROGENA HAGE | 16 |
| PARALEPTOPHL MEM | 24 |
| PROSTOIA BESAMET | 4 |
| CULTUS PILATUS | 4 |
| ISOPERLA FULVA | 4 |
| ISOPERLA QUINQUE | 16 |
| TAENIONEMA PACIF | 4 |
| CHEUMATOPSYCHE | 8 |
| HYDROPSYCHE OCCI | 8 |
| HYDROPTILA SP. | 48 |
| PSYCHOMYIA FLAVI | 8 |
| POLYPEDILUM SP.A | 4 |
| DIAMESA SP. B | 76 |
| CRICOTOPUS SP. B | 156 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 76 |
| ORTHOCLADIUS (EU | 52 |
| ORTHOCLADIUS MAL | 24 |
| ORTHOCLADIUS OBU | 48 |
| ABLABESMYIA SP. | 4 |
| SIMULIUM SP. | 4 |

| 19/B-53 | |
|---|---|
| BAETIS TRICAUDAT | 200 |
| EPHEMERELLA INFR | 240 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 8 |
| PARALEPTOPHL MEM | 12 |
| CAPNIA-GROUP SP. | 16 |
| PROSTOIA BESAMET | 8 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 16 |
| ISOPERLA QUINQUE | 8 |
| TAENIONEMA PACIF | 8 |
| CHEUMATOPSYCHE | 4 |
| HYDROPTILA SP. | 80 |
| PSYCHOMYIA FLAVI | 16 |
| DIAMESA SP. B | 52 |
| CRICOTOPUS SP. B | 144 |
| EUKIEFFERIELLA B | 32 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS (EU | 132 |
| ORTHOCLADIUS MAL | 56 |
| ORTHOCLADIUS OBU | 40 |

| 19/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 84 |
| EPHEMERELLA INFR | 68 |
| RHITHROGENA HAGE | 16 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 16 |
| CULTUS PILATUS | 8 |
| ISOPERLA QUINQUE | 4 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 8 |
| SYMPHITOPS COCKE | 12 |
| HYDROPTILA SP. | 88 |
| PSYCHOMYIA FLAVI | 4 |
| DIAMESA SP. B | 144 |
| CRICOTOPUS SP. B | 76 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 24 |
| ORTHOCLADIUS (EU | 76 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 32 |
| ORTHOCLADIUS OBU | 68 |

| 19/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 372 |
| EPHEMERELLA INFR | 192 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 20 |
| PARALEPTOPHL MEM | 28 |
| AMELETUS VELOX | 4 |
| CAPNIA-GROUP SP. | 48 |
| PROSTOIA BESAMET | 20 |
| CULTUS PILATUS | 28 |
| ISOPERLA FULVA | 12 |
| ISOPERLA QUINQUE | 12 |
| TAENIONEMA PACIF | 12 |
| CHEUMATOPSYCHE | 4 |
| HYDROPSYCHE OCCI | 12 |
| HYDROPTILA SP. | 32 |
| CERACLEA SP. | 4 |
| PSYCHOMYIA FLAVI | 16 |
| ZAITZEVIA PARVUL | 4 |
| TANYTARSUS SP. B | 4 |
| DIAMESA SP. B | 64 |
| CRICOTOPUS SP. B | 48 |
| EUKIEFFERIELLA B | 8 |
| ORTHOCLADIUS (EU | 76 |
| ORTHOCLADIUS MAL | 20 |
| ORTHOCLADIUS OBU | 36 |
| SIMULIUM SP. | 8 |

Table 16. Continued

| 217A-53 | |
|---|---|
| BAETIS TRICAUDAT | 40 |
| DRUNELLA GRANDIS | 12 |
| EPHEMERELLA INFR | 912 |
| PROSTOIA BESAMET | 8 |
| CLAASSENI SABULO | 4 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 4 |
| PTERONARCYS CALI | 4 |
| TAENIONEMA PACIF | 8 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 16 |
| HYDROPSYCHE OCCI | 20 |
| SYMPHITOPS COCKE | 12 |
| HYDROPTILA SP. | 124 |
| PSYCHOMYIA FLAVI | 12 |
| ZAITZEVIA PARVUL | 8 |
| MICROTENDIPES SP | 16 |
| PHAENOPSECTRA SP | 4 |
| PAGASTIA SP. | 20 |
| CRICOTOPUS SP. B | 44 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS (EU | 32 |
| ORTHOCLADIUS MAL | 24 |
| ORTHOCLADIUS OBU | 60 |
| TRISSOCLADIUS SP | 6 |
| OLIGOCHAETA | 4 |
| OLIGOCHAETA LUMB | 8 |
| TURBELLARI | 8 |

| 217B-53 | |
|---|---|
| BAETIS TRICAUDAT | 40 |
| EPHEMERELLA INFR | [illegible] |
| RHITHROGENA HAGE | 1 |
| PARALEPTOPHL MEM | [illegible] |
| AMELETUS VELOX | 1 |
| PROSTOIA BESAMET | [illegible] |
| CLAASSENI SABULO | [illegible] |
| CULTUS PILATUS | 4 |
| ISOPERLA FULVA | 4 |
| PTERONARCYS CALI | [illegible] |
| TAENIONEMA PACIF | 4 |
| ARCTOPSYCHE GRAN | [illegible] |
| CHEUMATOPSYCHE | [illegible] |
| HYDROPSYCHE OCCI | [illegible] |
| SYMPHITOPS COCKE | [illegible] |
| SYMPHITOPS SLOSS | [illegible] |
| HYDROPTILA SP. | [illegible] |
| CERACLEA SP. | 4 |
| PSYCHOMYIA FLAVI | 16 |
| ZAITZEVIA PARVUL | [illegible] |
| MICROTENDIPES SP | [illegible] |
| PHAENOPSECT SP.E | [illegible] |
| TANY[illegible] | [illegible] |
| PAGASTIA SP. | [illegible] |
| CRICOTOPUS SP. B | [illegible] |
| CRICOTOPUS SP. C | [illegible] |
| ORTHOCLADIUS (EU | 1 |
| ORTHOCLADIUS [illegible] | 4 |
| ORTHOCLADIUS MAL | 1 |
| ORTHOCLADIUS OBU | [illegible] |
| TRISSOCLADIUS SP | [illegible] |
| TURBELLARI | [illegible] |

Table 16. Continued

| 21/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 68 |
| DRUNELLA GRANDIS | 8 |
| EPHEMERELLA INFR | 1120 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 28 |
| PARALEPTOPHL MEN | 8 |
| HESPEROPERLA PAC | 4 |
| CULTUS PILATUS | 4 |
| ISOGENOIDES ELON | 4 |
| ISOPERLA FULVA | 16 |
| ISOPERLA QUINQUE | 4 |
| TAENIONEMA PACIF | 12 |
| CHEUMATOPSYCHE | 20 |
| HYDROPSYCHE OCCI | 16 |
| SYMPHITOPS COCKE | 4 |
| SYMPHITOPS SLOSS | 4 |
| HYDROPTILA SP. | 52 |
| PSYCHOMYIA FLAVI | 12 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 20 |
| MICROTENDIPES SP | 8 |
| PAGASTIA SP. | 12 |
| CRICOTOPUS SP. B | 20 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS (EU | 56 |
| ORTHOCLADIUS MAL | 24 |
| ORTHOCLADIUS OBU | 12 |
| TRISSOCLADIUS SP | 8 |
| SIMULIUM SP. | 4 |
| TURBELLARI | 4 |

| 21/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 32 |
| DRUNELLA GRANDIS | 8 |
| EPHEMERELLA INFR | 732 |
| RHITHROGENA HAGE | 16 |
| PARALEPTOPHL MEN | 8 |
| CLAASSENI SABULO | 4 |
| ISOGENOIDES ELON | 8 |
| ISOPERLA FULVA | 4 |
| SKWALA PARALLELA | 4 |
| BRACHYCENTRUS AM | 4 |
| CHEUMATOPSYCHE | 52 |
| HYDROPSYCHE OCCI | 16 |
| SYMPHITOPS COCKE | 12 |
| HYDROPTILA SP. | 160 |
| CERACLEA SP. | 4 |
| PSYCHOMYIA FLAVI | 12 |
| OPTIOSERVUS SPP. | 4 |
| MICROTENDIPES SP | 28 |
| DIAMESA SP. B | 4 |
| PAGASTIA SP. | 8 |
| CRICOTOPUS SP. B | 24 |
| ORTHOCLADIUS (EU | 24 |
| ORTHOCLADIUS MAL | 44 |
| ORTHOCLADIUS OBU | 12 |
| TRISSOCLADIUS SP | 8 |

Table 16. Continued

| | |
|---|---|
| 23/A-53 | |
| BAETIS TRICAUDAT | 24 |
| CAENIS SIMULANS | 4 |
| EPHEMERELLA INFR | 4 |
| RHITHROGENA HAGE | 8 |
| STENONEMA SP. | 4 |
| TAENIONEMA PACIF | 8 |
| AESHNA SP. | 4 |
| DUBIRAPHIA SP. | 4 |
| MICROPSECTR SP.A | 4 |
| PHAENOPSECT SP.B | 4 |
| DIAMESA SP. B | 4 |
| PAGASTIA SP. | 12 |
| CRICOTOPUS SP. B | 40 |
| ORTHOCLADIUS (EU | 28 |
| ORTHOCLADIUS G | 208 |
| ORTHOCLADIUS NIG | 40 |
| ORTHOCLADIUS OBU | 180 |
| SYNORTHOCLADIUS | 28 |
| TRISSOCLADIUS SP | 36 |
| SIMULIUM SP. | 28 |
| HYALELLA AZTECA | 176 |
| GYRAULUS SP. | 32 |
| OLIGOCHAETA | 4 |

| | |
|---|---|
| 23/B-53 | |
| BAETIS TRICAUDAT | 8 |
| CAENIS SIMULANS | 28 |
| EPHEMERELLA INFR | [illegible] |
| RHITHROGENA HAGE | 4 |
| STENONEMA SP. | 4 |
| CAPNIA-GROUP SP. | 4 |
| TAENIONEMA PACIF | 4 |
| AESHNA SP. | 8 |
| HYDROPTILA SP. | 16 |
| MYSTACIDES SP. | 4 |
| DUBIRAPHIA SP. | 4 |
| PHAENOPSECT SP.B | 4 |
| DIAMESA SP. B | 16 |
| PAGASTIA SP. | 4 |
| POTTHASTIA SP | 4 |
| CRICOTOPUS SP. B | [illegible] |
| ORTHOCLADIUS (EU | [illegible] |
| ORTHOCLADIUS G | [illegible] |
| ORTHOCLADIUS NIG | 24 |
| ORTHOCLADIUS OBU | 100 |
| SYNORTHOCLADIUS | 8 |
| TRISSOCLADIUS SP | 20 |
| SIMULIUM SP | [illegible] |
| HYALELLA AZTECA | [illegible] |
| GYRAULUS SP. | [illegible] |
| TURBELLARI | 12 |

| | |
|---|---|
| 23/C-53 | |
| BAETIS TRICAUDAT | 8 |
| CAENIS SIMULANS | 4 |
| RHITHROGENA HAGE | 4 |
| TAENIONEMA PACIF | 8 |
| HYDROPTILA SP. | 4 |
| POLYCENTROPUS SP | 8 |
| TANYTARSUS SP. B | 4 |
| DIAMESA SP. B | 12 |
| PAGASTIA SP. | 16 |
| CRICOTOPUS SP. B | 40 |
| ORTHOCLADIUS (EU | 12 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS G | 308 |
| ORTHOCLADIUS NIG | 12 |
| ORTHOCLADIUS OBU | 180 |
| SYNORTHOCLADIUS | 16 |
| SIMULIUM SP. | 16 |
| HYALELLA AZTECA | 152 |
| GYRAULUS SP. | 4 |
| PHYSA SP. | 12 |
| OLIGOCHAETA | 4 |

| | |
|---|---|
| 23/D-53 | |
| BAETIS TRICAUDAT | 16 |
| CAENIS SIMULANS | 8 |
| RHITHROGENA HAGE | 8 |
| TAENIONEMA PACIF | 8 |
| HYDROPTILA SP. | 12 |
| TRIAENODES SP. | 4 |
| MICROPSECTR SP.A | 12 |
| MICROPSECTR SP.C | 4 |
| DIAMESA SP. B | 4 |
| PAGASTIA SP. | 12 |
| CORYNONEURA SP. | 4 |
| CRICOTOPUS SP. B | 20 |
| ORTHOCLADIUS (EU | 28 |
| ORTHOCLADIUS G | 140 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 36 |
| SYNORTHOCLADIUS | 12 |
| TRISSOCLADIUS SP | 16 |
| SIMULIUM SP. | 24 |
| HYALELLA AZTECA | 128 |
| GYRAULUS SP. | 8 |

Table 16. Continued

| 24/A-53 | |
|---|---|
| BAETIS TRICAUDAT | 4 |
| EPHEMERELLA INFR | 12 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 10 |
| STENONEMA SP. | 48 |
| ISOGENOIDES ELON | 6 |
| CHEUMATOPSYCHE | 52 |
| SYMPHITOPS COCKE | 6 |
| HYDROPTILA SP. | 4 |
| CERACLEA SP. | 2 |
| ZAITZEVIA PARVUL | 10 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 6 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.A | 2 |
| DIAMESA SP. B | 28 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 286 |
| EUKIEFFERIELLA B | 20 |
| EUKIEFFERIELLA E | 10 |
| ORTHOCLADIUS (EU | 58 |
| ORTHOCLADIUS MAL | 42 |
| ORTHOCLADIUS OBU | 438 |
| TRISSOCLADIUS SP | 42 |
| SYNORTHOCLADIUS | 8 |
| SIMULIUM SP. | 38 |
| FERRISSIA SP. | 2 |

| 24/B-53 | |
|---|---|
| BAETIS TRICAUDAT | 14 |
| CAUDATELLA HYSTR | 2 |
| EPHEMERELLA INFR | 6 |
| RHITHROGENA HAGE | 4 |
| STENONEMA SP. | 10 |
| PARALEPTOPHL MEM | 4 |
| PROSTOIA BESAMET | 2 |
| TAENIONEMA PACIF | 4 |
| CHEUMATOPSYCHE | 10 |
| HYDROPTILA SP. | 6 |
| PSYCHOMYIA FLAVI | 2 |
| ZAITZEVIA PARVUL | 2 |
| MICROPSECTR SP.A | 14 |
| DIAMESA SP. B | 42 |
| CRICOTOPUS SP. B | 246 |
| EUKIEFFERIELLA A | 2 |
| EUKIEFFERIELLA B | 10 |
| ORTHOCLADIUS (EU | 44 |
| ORTHOCLADIUS MAL | 6 |
| ORTHOCLADIUS OBU | 318 |
| TRISSOCLADIUS SP | 26 |
| SYNORTHOCLADIUS | 10 |
| ABLABESMYIA SP. | 4 |
| SIMULIUM SP. | 28 |
| LYMNAEA SP. | 4 |
| OLIGOCHAETA LUMB | 2 |

| 24/C-53 | |
|---|---|
| BAETIS TRICAUDAT | 30 |
| EPHEMERELLA INFR | 6 |
| RHITHROGENA HAGE | 10 |
| STENONEMA SP. | 22 |
| PROSTOIA BESAMET | 4 |
| TAENIONEMA PACIF | 2 |
| CHEUMATOPSYCHE | 2 |
| HYDROPTILA SP. | 2 |
| MICROPSECTR SP.A | 8 |
| DIAMESA SP. B | 40 |
| CRICOTOPUS SP. B | 216 |
| EUKIEFFERIELLA B | 18 |
| ORTHOCLADIUS (EU | 168 |
| ORTHOCLADIUS MAL | 18 |
| ORTHOCLADIUS OBU | 264 |
| TRISSOCLADIUS SP | 14 |
| SYNORTHOCLADIUS | 12 |
| SIMULIUM SP. | 58 |
| LYMNAEA SP. | 4 |

| 24/D-53 | |
|---|---|
| BAETIS TRICAUDAT | 16 |
| EPHEMERELLA INFR | 10 |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 6 |
| STENONEMA SP. | 78 |
| PARALEPTOPHL MEM | 2 |
| ISOGENOIDES ELON | 12 |
| TAENIONEMA PACIF | 8 |
| CHEUMATOPSYCHE | 80 |
| HYDROPSYCHE OCCI | 6 |
| SYMPHITOPS COCKE | 20 |
| HYDROPTILA SP. | 6 |
| CERACLEA SP. | 6 |
| PSYCHOMYIA FLAVI | 4 |
| ZAITZEVIA PARVUL | 14 |
| MICROPSECTR SP.A | 14 |
| MICROTENDIPES SP | 18 |
| DIAMESA SP. B | 44 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 276 |
| EUKIEFFERIELLA B | 18 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS (EU | 110 |
| ORTHOCLADIUS B | 14 |
| ORTHOCLADIUS MAL | 38 |
| ORTHOCLADIUS OBU | 408 |
| TRISSOCLADIUS SP | 26 |
| SYNORTHOCLADIUS | 10 |
| SIMULIUM SP | 72 |
| FERRISSIA SP. | 12 |
| LYMNAEA SP. | 12 |

Table 16. Continued

| 25/A-53 | |
|---|---|
| STENONEMA SP. | 20 |
| CHEUMATOPSYCHE | 20 |
| HYDROPTILA SP. | 16 |
| PSYCHOMYIA FLAVI | 4 |
| DICROTENDIP SP.A | 4 |
| MICROPSECTR SP.A | 24 |
| MICROTENDIPES SP | 8 |
| DIAMESA SP. B | 12 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 332 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS (EU | 44 |
| ORTHOCLADIUS OBU | 608 |
| TRISSOCLADIUS SP | 32 |
| SYNORTHOCLADIUS | 4 |
| SIMULIUM SP. | 12 |
| GYRAULUS SP. | 12 |
| LYMNAEA SP. | 4 |
| OLIGOCHAETA LUMB | 4 |

| 25/B-53 | |
|---|---|
| STENONEMA SP. | 1 |
| CHEUMATOPSYCHE | [illegible] |
| HYDROPSYCHE OCCI | [illegible] |
| PSYCHOMYIA FLAVI | [illegible] |
| MICROPSECTR SP.A | [illegible] |
| MICROTENDIPES SP | 12 |
| DIAMESA SP. B | 4 |
| CRICOTOPUS SP. B | 120 |
| ORTHOCLADIUS (EU | 4 |
| ORTHOCLADIUS OBU | [illegible] |
| TRISSOCLADIUS SP | 4 |
| OLIGOCHAETA LUMB | 4 |

| 25/C-53 | |
|---|---|
| STENONEMA SP. | 20 |
| CHEUMATOPSYCHE | 8 |
| HYDROPTILA SP. | 32 |
| CERACLEA SP. | 8 |
| PSYCHOMYIA FLAVI | 4 |
| DICROTENDIP SP.A | 16 |
| MICROPSECTR SP.A | 48 |
| MICROTENDIPES SP | 20 |
| DIAMESA SP. B | 12 |
| CRICOTOPUS SP. B | 256 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS (EU | 28 |
| ORTHOCLADIUS OBU | 768 |
| TRISSOCLADIUS SP | 16 |
| SYNORTHOCLADIUS | 4 |
| GYRAULUS SP. | 12 |

| 25/D-53 | |
|---|---|
| RHITHROGENA HAG | [illegible] |
| STENONEMA SP. | [illegible] |
| CHEUMATOPSYCHE | 20 |
| HYDROPTILA SP. | [illegible] |
| CERACLEA SP. | 4 |
| DICROTENDIP SP A | 20 |
| MICROPSECTR SP.A | 52 |
| MICROTENDIPES SP | [illegible] |
| PHAENOPSECTRA SP | 4 |
| DIAMESA SP. B | 12 |
| PAGASTIA SP. | [illegible] |
| CRICOTOPUS SP. B | [illegible] |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS (EU | [illegible] |
| ORTHOCLADIUS OBU | 552 |
| TRISSOCLADIUS SP | [illegible] |
| ABLABESMYIA SP. | 4 |
| WIEDEMANNIA SP. | 4 |
| LYMNAEA SP. | 4 |
| OLIGOCHAETA | 4 |

Table 16. Continued

| 277A-53 | |
|---|---|
| BAETIS TRICAUDAT | 4 |
| EPHEMERELLA INFR | 2 |
| HEPTAGENIA SOLIT | 18 |
| RHITHROGENA HAGE | 2 |
| STENONEMA SP. | 92 |
| PTERONARCYS CALI | 2 |
| TAENIONEMA PACIF | 2 |
| OPHIOGOMPHUS SP. | 4 |
| CHEUMATOPSYCHE | 16 |
| HYDROPSYCHE SP.A | 6 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 22 |
| POLYCENTROPUS SP | 2 |
| PSYCHOMYIA FLAVI | 2 |
| DICROTENDIP SP.A | 22 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.[illegible] | 2 |
| [illegible] | 6 |
| [illegible] | 24 |
| DIAMESA SP. A | 2 |
| DIAMESA SP. B | 22 |
| PAGASTIA SP. | 10 |
| CRICOTOPUS SP. B | 90 |
| EUKIEFFERIELLA A | 6 |
| EUKIEFFERIELLA B | 6 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS (EU | 22 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS MAL | 12 |
| ORTHOCLADIUS OBU | 124 |
| TRISSOCLADIUS SP | 16 |
| ABLABESMYIA SP. | 2 |
| [illegible] SP. | 4 |
| SIMULIUM SP. | 66 |

| 277B-53 | |
|---|---|
| HEPTAGENIA SOLIT | 6 |
| STENONEMA SP. | 58 |
| CHEUMATOPSYCHE | 16 |
| HYDROPSYCHE OCCI | 2 |
| HYDROPTILA SP. | 14 |
| CERACLEA SP. | 10 |
| PARARGYRACTIS SP | 2 |
| DUBIRAPHIA SP. | 2 |
| ZAITZEVIA PARVUL | 2 |
| DICROTENDIP SP.A | 16 |
| MICROTENDIPES SP | 20 |
| TANYTARSUS SP. B | 3 |
| DIAMESA SP. B | 8 |
| PAGASTIA SP. | 6 |
| CRICOTOPUS SP. B | 26 |
| EUKIEFFERIELLA B | 2 |
| ORTHOCLADIUS (EU | 2 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | |
| TRISSOCLADIUS SP | 12 |
| SIMULIUM SP | 20 |
| PACIFASTICUS SP. | 4 |

Table 16. Continued

| 27/C-53 | |
|---|---|
| EPHEMERELLA INFR | 2 |
| HEPTAGENIA SOLIT | [illegible] |
| STENONEMA SP. | 156 |
| PROSTOIA BESAMET | 2 |
| TAENIONEMA PACIF | 4 |
| OPHIOGOMPHUS SP. | 6 |
| CHEUMATOPSYCHE | 26 |
| HYDROPSYCHE SP.A | 10 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 14 |
| CERACLEA SP. | 8 |
| PSYCHOMYIA FLAVI | 4 |
| PARARGYRACTIS SP | 6 |
| DICROTENDIP SP.A | 40 |
| DICROTENDIP SP.C | 2 |
| MICROPSECTR SP.A | 4 |
| MICROTENDIPES SP | 23 |
| PARATANYTARSUS | 2 |
| TANYTARSUS SP. B | 16 |
| DIAMESA SP. B | 12 |
| PAGASTIA SP. | 12 |
| CRICOTOPUS SP. B | 76 |
| EUKIEFFERIELLA A | 2 |
| EUKIEFFERIELLA D | 6 |
| EUKIEFFERIELLA E | 2 |
| EUKIEFFERIELLA F | 2 |
| HETEROTRISSOCLAD | 2 |
| ORTHOCLADIUS (EU | 20 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 62 |
| TRISSOCLADIUS SP | 6 |
| WIEDEMANNIA SP | 2 |
| SIMULIUM SP. | 58 |

| 27/D-53 | |
|---|---|
| HEPTAGENIA SOLIT | [illegible] |
| STENONEMA SP. | 12 |
| OPHIOGOMPHUS SP. | [illegible] |
| CHEUMATOPSYCHE | [illegible] |
| HYDROPSYCHE SP.A | [illegible] |
| HYDROPSYCHE OCCI | [illegible] |
| SYMPHITOPS COCKE | [illegible] |
| HYDROPTILA SP. | [illegible] |
| CERACLEA SP. | 6 |
| PSYCHOMYIA FLAVI | 16 |
| PARARGYRACTIS SP | 2 |
| DICROTENDIP SP.A | 14 |
| DICROTENDIP SP.C | [illegible] |
| MICRO[illegible] | [illegible] |
| TANYTA[illegible] B | [illegible] |
| XENOCHIRONOMUS | |
| DIAMESA SP. B | [illegible] |
| PAGASTIA SP. | |
| CRICOTOPUS SP. B | [illegible] |
| EUKIEFFERIELLA A | |
| [illegible] | [illegible] |
| [illegible] | |
| ORTH[illegible] | |
| ORTHO[illegible] | |
| ORTHO[illegible] | |
| TRISSO[illegible] SP | [illegible] |
| SIMULIUM SP. | [illegible] |

Table 16. Deep Water Monitoring Stations - Petite Ponar Grab Samples

| 26/1-53 | |
|---|---|
| CHIRONOMUS SP. | 1 |
| CRYPTOCHIRONOMUS | 2 |
| PARALAUTERBORNIE | 5 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.B | 8 |
| TANYTARSUS SP. C | 12 |
| DIAMESA SP. D | 1 |
| ORTHOCLADIUS OBU | 2 |
| TRISSOCLADIUS SP | 2 |
| PROCLADIUS SP. A | 53 |
| OLIGOCHAETA | 63 |

| 26/2-53 | |
|---|---|
| CHIRONOMUS SP. | 8 |
| CRYPTOCHIRONOMUS | 1 |
| PHAENOPSECTRA SP | 4 |
| ORTHOCLADIUS OBU | 2 |
| TRISSOCLADIUS SP | 1 |
| PROCLADIUS SP. A | 11 |
| OLIGOCHAETA | 95 |

| 26/3-53 | |
|---|---|
| CRYPTOCHIRONOMUS | 1 |
| PARALAUTERBORNIE | 1 |
| POLYPEDILUM SP.B | 1 |
| TANYTARSUS SP. C | 13 |
| ORTHOCLADIUS E | 2 |
| TRISSOCLADIUS SP | 1 |
| PROCLADIUS SP. A | 60 |
| OLIGOCHAETA | 106 |

| 28A/1-53 | |
|---|---|
| PROCLADIUS SP. A | 1 |
| OLIGOCHAETA | 4 |

| 28A/2-53 | |
|---|---|
| PROCLADIUS SP. A | 10 |
| OLIGOCHAETA | 2 |

| 28A/3-53 | |
|---|---|
| CHIRONOMUS SP. | 11 |
| PROCLADIUS SP. A | 29 |
| OLIGOCHAETA | 21 |

| 28B/1-53 | |
|---|---|
| CHIRONOMUS SP | 16 |
| PROCLADIUS SP. A | 3 |
| OLIGOCHAETA | 2 |

| 28B/2-53 | |
|---|---|
| CHIRONOMUS SP. | 21 |
| PROCLADIUS SP. A | 1 |
| OLIGOCHAETA | 2 |

| 28B/3-53 | |
|---|---|
| CHIRONOMUS SP. | 27 |
| PROCLADIUS SP. A | 5 |
| OLIGOCHAETA | 6 |

| 30/2-53* | |
|---|---|
| ORTHOCLADIUS OBU | 2 |

* 30/1 and 30/3 have zero counts.

Table 16. Continued

| | |
|---|---|
| 31/A-53 | |
| HYDROPTILA SP. | 2 |
| ORTHOCLADIUS OBU | 4 |
| LYMNAEA SP. | 1 |

| | |
|---|---|
| 31/B-53 | |
| HYDROPTILA SP. | 2 |
| EUKIEFFERIELLA E | 1 |
| ORTHOCLADIUS OBU | 1 |
| GYRAULUS SP. | 4 |

| | |
|---|---|
| 31/C-53 | |
| CHEUMATOPSYCHE | 1 |
| HYDROPTILA SP. | 2 |
| CRICOTOPUS SP. B | 1 |
| ORTHOCLADIUS OBU | 5 |
| GYRAULUS SP. | 3 |

| | |
|---|---|
| 31/D-53 | |
| HYDROPTILA SP. | 5 |
| DICROTENDIP SP.A | 1 |
| MICROTENDIPES SP | 1 |
| DIAMESA SP. B | 1 |
| CRICOTOPUS SP. B | 2 |
| EUKIEFFERIELLA B | 5 |
| ORTHOCLADIUS OBU | 4 |
| HYALELLA AZTECA | 1 |
| GYRAULUS SP. | 4 |

| | |
|---|---|
| 3/1-53 | |
| CHIRONOMUS SP. | |
| MONODIAMESA SP. | 1 |
| EUKIEFFERIELLA B | 1 |
| ORTHOCLADIUS OBU | [illegible] |
| OLIGOCHAETA | 1 |

| | |
|---|---|
| 3/2-53 | |
| CHIRONOMUS SP. | 7 |
| TANYTARSUS SP. C | 1 |
| DIAMESA SP | 1 |
| ORTHOCLADIUS O | [illegible] |
| OLIGOCHAETA | 1 |

| | |
|---|---|
| 3/3-53 | |
| CHIRONOMUS SP. | 9 |
| OLIGOCHAETA | 5 |

Table 16. Benthic Macroinvertebrate Sample Counts and Identifications Summer 1985

Shallow Water Stations - Kick Samples

| 1/A-57 | | 1/B-57 | |
|---|---|---|---|
| BAETIS INSIGNIFI | 156 | BAETIS INSIGNIFI | 120 |
| BAETIS TRICAUDAT | 112 | BAETIS TRICAUDAT | 76 |
| ATTENELLA MARGAR | 44 | ATTENELLA MARGAR | 32 |
| DRUNELLA GRANDIS | 36 | DRUNELLA GRANDIS | 12 |
| SERRATELLA TIBIA | 40 | SERRATELLA TIBIA | 36 |
| RHITHROGENA HAGE | 24 | NIXE SIMPLICIOID | 4 |
| TRICORYTHODES MI | 36 | RHITHROGENA HAGE | 32 |
| ALLOPERLA-GROUP | 8 | TRICORYTHODES MI | 16 |
| ISOGENOIDES ELON | 12 | CLAASSENI SABULO | 4 |
| SKWALA PARALLELA | 4 | ISOGENOIDES ELON | 4 |
| PTERONARCELLA BA | 32 | ISOPERLA QUINQUE | 4 |
| ARCTOPSYCHE GRAN | 28 | PTERONARCELLA BA | 36 |
| CHEUMATOPSYCHE | 28 | PTERONARCYS CALI | 4 |
| HYDROPSYCHE OCCI | 224 | ARCTOPSYCHE GRAN | 48 |
| SYMPHITOPS COCKE | 152 | CHEUMATOPSYCHE | 44 |
| HYDROPTILA SP. | 36 | HYDROPSYCHE OCCI | 300 |
| NEOTRICHIA SP. | 8 | SYMPHITOPS COCKE | 260 |
| OPTIOSERVUS SPP. | 60 | HYDROPTILA SP. | 4 |
| ZAITZEVIA PARVUL | 72 | OPTIOSERVUS SPP. | 24 |
| ATHERIX VARIEGAT | 20 | ZAITZEVIA PARVUL | 36 |
| MICROPSECTR SP.A | 4 | ATHERIX VARIEGAT | 24 |
| MICROPSECTR SP.C | 8 | MICROPSECTR SP.C | 8 |
| MICROTENDIPES SP | 12 | POLYPEDILUM SP.A | 60 |
| POLYPEDILUM SP.A | 84 | TANYTARSUS SP. C | 4 |
| TANYTARSUS SP. C | 20 | EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA A | 4 | EUKIEFFERIELLA B | 12 |
| EUKIEFFERIELLA B | 40 | EUKIEFFERIELLA E | 40 |
| EUKIEFFERIELLA E | 24 | ORTHOCLADIUS MAL | 4 |
| EUKIEFFERIELLA G | 4 | ORTHOCLADIUS OBU | 4 |
| ORTHOCLADIUS B | 28 | SIMULIUM SP. | 20 |
| ORTHOCLADIUS MAL | 12 | HEXATOMA SP. | 28 |
| ORTHOCLADIUS OBU | 12 | | |
| ABLABESMYIA SP. | 4 | | |
| CHELIFERA SP. | 4 | | |
| SIMULIUM SP. | 4 | | |
| HEXATOMA SP. | 28 | | |
| OLIGOCHAETA | 4 | | |

| 1/C-57 | |
|---|---|
| BAETIS INSIGNIFI | 200 |
| BAETIS TRICAUDAT | 144 |
| ATTENELLA MARGAR | 72 |
| DRUNELLA GRANDIS | 8 |
| SERRATELLA TIBIA | 20 |
| EPEORUS ALBERTAE | 4 |
| RHITHROGENA HAGE | 40 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 28 |
| ALLOPERLA-GROUP | 4 |
| ZAPADA CINCTIPES | 4 |
| CLAASSENI SABULO | 20 |
| ISOGENOIDES ELON | 12 |
| SKWALA PARALLELA | 16 |
| PTERONARCELLA BA | 20 |
| ARCTOPSYCHE GRAN | 56 |
| CHEUMATOPSYCHE | 24 |
| HYDROPSYCHE OCCI | 188 |
| SYMPHITOPS COCKE | 100 |
| NEOTRICHIA SP. | 4 |
| OECETIS SP. A | 4 |
| OPTIOSERVUS SPP. | 32 |
| ZAITZEVIA PARVUL | 64 |
| ATHERIX VARIEGAT | 20 |
| MICROPSECTR SP.C | 8 |
| POLYPEDILUM SP.A | 136 |
| TANYTARSUS SP. C | 20 |
| PAGASTIA SP. | 8 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA B | 12 |
| EUKIEFFERIELLA E | 44 |
| EUKIEFFERIELLA G | 4 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 12 |
| PSECTROCLADIUS B | 8 |
| SYNORTHOCLADIUS | 4 |
| ABLABESMYIA SP. | 8 |
| CHELIFERA SP. | 8 |
| SIMULIUM SP. | 8 |
| HEXATOMA SP. | 12 |

| 1/D-57 | |
|---|---|
| BAETIS HAGENI | 8 |
| BAETIS INSIGNIFI | 68 |
| BAETIS TRICAUDAT | 44 |
| ATTENELLA MARGAR | 40 |
| DRUNELLA GRANDIS | 12 |
| SERRATELLA TIBIA | 28 |
| TIMPANOGA HECUBA | 4 |
| NIXE CRIDDLEI | 4 |
| NIXE SIMPLICIOID | 16 |
| RHITHROGENA HAGE | 40 |
| PARALEPTOPHL DEB | 4 |
| ALLOPERLA-GROUP | 4 |
| CLAASSENI SABULO | 4 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 8 |
| PTERONARCELLA BA | 32 |
| PTERONARCYS CALI | 8 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 40 |
| CHEUMATOPSYCHE | 36 |
| HYDROPSYCHE OCCI | 244 |
| SYMPHITOPS COCKE | 176 |
| NEOTRICHIA SP. | 8 |
| OPTIOSERVUS SPP. | 16 |
| ZAITZEVIA PARVUL | 52 |
| ATHERIX VARIEGAT | 24 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 20 |
| POLYPEDILUM SP.A | 44 |
| TANYTARSUS SP. C | 8 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 8 |
| EUKIEFFERIELLA G | 4 |
| HETEROTRISSOCLAD | 4 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS OBU | 4 |
| SIMULIUM SP. | 12 |
| PROTANYDERUS SP. | 4 |
| ANTOCHA SP. | 4 |
| HEXATOMA SP. | 28 |

Table 16. Continued

| 2/A-57 | |
|---|---|
| BAETIS HAGENI | 24 |
| BAETIS INSIGNIFI | 18 |
| BAETIS TRICAUDAT | 14 |
| DRUNELLA DODDSI | 2 |
| SERRATELLA TIBIA | 74 |
| EPEORUS ALBERTAE | 2 |
| NIXE CRIDDLEI | 2 |
| RHITHROGENA HAGE | 6 |
| ALLOPERLA-GROUP | 4 |
| CALINEURIA CALIF | 20 |
| CLAASSENI SABULO | 26 |
| SKWALA PARALLELA | 8 |
| PTERONARCYS CALI | 10 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 44 |
| HYDROPSYCHE OCCI | 40 |
| SYMPHITOPS COCKE | 20 |
| LEPIDOSTOMA SP.A | 2 |
| DICOSMOECUS SP. | 6 |
| WORMALDIA SP. | 18 |
| OPTIOSERVUS SPP. | 72 |
| STELENMIS SP. | 2 |
| ZAITZEVIA PARVUL | 74 |
| PALPOMY-GP SP. A | 2 |
| MICROPSECTR SP.C | 588 |
| MICROTENDIPES SP | 22 |
| POLYPEDILUM SP.A | 44 |
| TANYTARSUS SP. C | 2 |
| EUKIEFFERIELLA A | 6 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS B | 2 |
| ORTHOCLADIUS MAL | 4 |
| THIENEMANIELL SP | 2 |
| ABLABESMYIA SP. | 2 |
| CHELIFERA SP. | 2 |
| ANTOCHA SP. | 10 |
| HEXATOMA SP. | 16 |
| PHYSA SP. | 46 |
| OLIGOCHAETA LUMB | 14 |

| 2/B-57 | |
|---|---|
| BAETIS HAGENI | 16 |
| BAETIS INSIGNIFI | 36 |
| BAETIS TRICAUDAT | 14 |
| ATTENELLA MARGAR | 2 |
| DRUNELLA DODDSI | 4 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 58 |
| EPEORUS ALBERTAE | 6 |
| RHITHROGENA HAGE | 14 |
| ALLOPERLA-GROUP | 4 |
| CALINEURIA CALIF | 18 |
| CLAASSENI SABULO | 16 |
| PTERONARCYS CALI | 6 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 52 |
| HYDROPSYCHE OCCI | 34 |
| SYMPHITOPS COCKE | 28 |
| HYDROPTILA SP. | 4 |
| NEOTRICHIA SP. | 2 |
| WORMALDIA SP. | 10 |
| OPTIOSERVUS SPP. | 54 |
| ZAITZEVIA PARVUL | 64 |
| MICROPSECTR SP.A | 2 |
| MICROPSECTR SP.C | 370 |
| MICROTENDIPES SP | 12 |
| POLYPEDILUM SP.A | 14 |
| TANYTARSUS SP. C | 8 |
| EUKIEFFERIELLA A | 6 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 8 |
| HETEROTRISSOCLAD | 2 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS OBU | 2 |
| SIMULIUM SP. | 6 |
| ANTOCHA SP. | 2 |
| HEXATOMA SP. | 14 |
| PHYSA SP. | 34 |
| OLIGOCHAETA LUMB | 2 |

Table 16. Continued

| 2/C-57 | |
|---|---|
| BAETIS INSIGNIFI | 60 |
| BAETIS TRICAUDAT | 32 |
| DRUNELLA DODDSI | 8 |
| DRUNELLA GRANDIS | 8 |
| SERRATELLA TIBIA | 42 |
| EPEORUS ALBERTAE | 12 |
| RHITHROGENA HAGE | 2 |
| ALLOPERLA-GROUP | 2 |
| CALINEURIA CALIF | 6 |
| CLAASSENI SABULO | 8 |
| PTERONARCYS CALI | 2 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 64 |
| HYDROPSYCHE OCCI | 42 |
| SYMPHITOPS COCKE | 44 |
| LEUCOTRICHIA PIC | 2 |
| NEOTRICHIA SP. | 8 |
| WORMALDIA SP. | 2 |
| PSYCHOMYIA FLAVI | 2 |
| RHYACOPHILA ANGE | 2 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 84 |
| MICROPSECTR SP.C | 284 |
| MICROTENDIPES SP | 2 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.A | 10 |
| TANYTARSUS SP. C | 6 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 6 |
| ORTHOCLADIUS MAL | 2 |
| ABLABESMYIA SP. | 2 |
| SIMULIUM SP. | 2 |
| ANTOCHA SP. | 2 |
| HEXATOMA SP. | 22 |

| 2/D-57 | |
|---|---|
| BAETIS HAGENI | 10 |
| BAETIS INSIGNIFI | 36 |
| BAETIS TRICAUDAT | 30 |
| ATTENELLA MARGAR | 2 |
| DRUNELLA DODDSI | 10 |
| DRUNELLA GRANDIS | 2 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 58 |
| EPEORUS ALBERTAE | 12 |
| RHITHROGENA HAGE | 2 |
| ALLOPERLA-GROUP | 2 |
| CALINEURIA CALIF | 10 |
| CLAASSENI SABULO | 8 |
| PTERONARCYS CALI | 2 |
| ARCTOPSYCHE GRAN | 18 |
| CHEUMATOPSYCHE | 26 |
| HYDROPSYCHE OCCI | 42 |
| SYMPHITOPS COCKE | 46 |
| LEUCOTRICHIA PIC | 4 |
| OECETIS SP. A | 4 |
| DICOSMOECUS SP. | 4 |
| WORMALDIA SP. | 14 |
| RHYACOPHILA ANGE | 2 |
| OPTIOSERVUS SPP. | 18 |
| ZAITZEVIA PARVUL | 58 |
| MICROPSECTR SP.C | 226 |
| MICROTENDIPES SP | 4 |
| POLYPEDILUM SP.A | 18 |
| TANYTARSUS SP. C | 10 |
| EUKIEFFERIELLA B | 2 |
| EUKIEFFERIELLA E | 6 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 8 |
| CHELIFERA SP. | 2 |
| HEXATOMA SP. | 12 |
| PHYSA SP. | 52 |
| OLIGOCHAETA LUMB | 2 |

| 4/A-57 | |
|---|---|
| BAETIS HAGENI | 20 |
| BAETIS INSIGNIFI | 64 |
| BAETIS TRICAUDAT | 372 |
| DRUNELLA DODDSI | 32 |
| SERRATELLA TIBIA | 148 |
| EPEORUS ALBERTAE | 28 |
| RHITHROGENA HAGE | 24 |
| HESPEROPERLA PAC | 8 |
| ISOGENOIDES ELON | 12 |
| SKWALA PARALLELA | 12 |
| PTERONARCELLA BA | 32 |
| PTERONARCYS CALI | 32 |
| ARCTOPSYCHE GRAN | 20 |
| CHEUMATOPSYCHE | 348 |
| HYDROPSYCHE OCCI | 140 |
| SYMPHITOPS COCKE | 444 |
| HYDROPTILA SP. | 48 |
| NEOTRICHIA SP. | 4 |
| WORMALDIA SP. | 12 |
| PSYCHOMYIA FLAVI | 16 |
| OPTIOSERVUS SPP. | 56 |
| ZAITZEVIA PARVUL | 120 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 52 |
| POLYPEDILUM SP.A | 240 |
| TANYTARSUS SP. C | 4 |
| PAGASTIA SP. | 8 |
| EUKIEFFERIELLA B | 144 |
| EUKIEFFERIELLA E | 8 |
| EUKIEFFERIELLA G | 8 |
| ORTHOCLADIUS B | 28 |
| ORTHOCLADIUS MAL | 12 |
| ORTHOCLADIUS NIG | 8 |
| ORTHOCLADIUS OBU | 16 |
| SIMULIUM SP. | 40 |
| ANTOCHA SP. | 16 |
| OLIGOCHAETA | 4 |
| TURBELLARI | 8 |

| 4/B-57 | |
|---|---|
| BAETIS INSIGNIFI | 60 |
| BAETIS TRICAUDAT | 156 |
| ATTENELLA MARGAR | 4 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 40 |
| EPEORUS ALBERTAE | 4 |
| NIXE CRIDDLEI | 4 |
| RHITHROGENA HAGE | 4 |
| TRICORYTHODES MI | 12 |
| CLAASSENI SABULO | 12 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 8 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 24 |
| CHEUMATOPSYCHE | 144 |
| HYDROPSYCHE OCCI | 52 |
| SYMPHITOPS COCKE | 188 |
| HYDROPTILA SP. | 60 |
| NEOTRICHIA SP. | 4 |
| PSYCHOMYIA FLAVI | 40 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 28 |
| ZAITZEVIA PARVUL | 28 |
| MICROPSECTR SP.C | 52 |
| POLYPEDILUM SP.A | 84 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA B | 68 |
| EUKIEFFERIELLA E | 4 |
| EUKIEFFERIELLA G | 4 |
| ORTHOCLADIUS B | 16 |
| ORTHOCLADIUS MAL | 48 |
| ORTHOCLADIUS OBU | 8 |
| ANTOCHA SP. | 16 |
| OLIGOCHAETA | 4 |

Table 16. Continued

| 4/C-57 | |
|---|---|
| BAETIS HAGENI | 8 |
| BAETIS INSIGNIFI | 72 |
| BAETIS TRICAUDAT | 84 |
| ATTENELLA MARGAR | 20 |
| SERRATELLA TIBIA | 36 |
| TIMPANOGA HECUBA | 4 |
| EPEORUS ALBERTAE | 4 |
| TRICORYTHODES MI | 12 |
| CLAASSENI SABULO | 4 |
| HESPEROPERLA PAC | 12 |
| PTERONARCYS CALI | 24 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 224 |
| HYDROPSYCHE OCCI | 56 |
| SYMPHITOPS COCKE | 204 |
| SYMPHITOPS SLOSS | 4 |
| HYDROPTILA SP. | 52 |
| WORMALDIA SP. | 20 |
| PSYCHOMYIA FLAVI | 40 |
| PARARGYRACTIS SP | 8 |
| OPTIOSERVUS SPP. | 16 |
| ZAITZEVIA PARVUL | 28 |
| MICROPSECTR SP.C | 88 |
| MICROTENDIPES SP | 12 |
| POLYPEDILUM SP.A | 60 |
| TANYTARSUS SP. C | 4 |
| EUKIEFFERIELLA B | 8 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS MAL | 20 |
| ORTHOCLADIUS OBU | 4 |
| ANTOCHA SP. | 8 |
| TURBELLARI | 4 |

| 4/D-57 | |
|---|---|
| BAETIS HAGENI | 12 |
| BAETIS INSIGNIFI | 56 |
| BAETIS TRICAUDAT | 176 |
| ATTENELLA MARGAR | 16 |
| DRUNELLA GRANDIS | 16 |
| SERRATELLA TIBIA | 92 |
| EPEORUS ALBERTAE | 4 |
| RHITHROGENA HAGE | 8 |
| CLAASSENI SABULO | 12 |
| HESPEROPERLA PAC | 8 |
| ISOGENOIDES ELON | 4 |
| PTERONARCELLA BA | 8 |
| PTERONARCYS CALI | 36 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 296 |
| HYDROPSYCHE OCCI | 68 |
| SYMPHITOPS COCKE | 336 |
| HYDROPTILA SP. | 104 |
| NEOTRICHIA SP | 12 |
| WORMALDIA SP. | 32 |
| PSYCHOMYIA FLAVI | 28 |
| OPTIOSERVUS SPP. | 48 |
| ZAITZEVIA PARVUL | 108 |
| CRYPTOCHIRONOMUS | 4 |
| MICROPSECTR SP.A | 12 |
| MICROPSECTR SP.C | 52 |
| MICROTENDIPES SP | 8 |
| POLYPEDILUM SP.A | 136 |
| TANYTARSUS SP. C | 8 |
| PAGASTIA SP. | 8 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 84 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS B | 76 |
| ORTHOCLADIUS MAL | 72 |
| ORTHOCLADIUS OBU | 20 |
| SIMULIUM SP. | 4 |
| ANTOCHA SP. | 24 |

| 5/A-57 | |
|---|---|
| BAETIS INSIGNIFI | 164 |
| BAETIS TRICAUDAT | 148 |
| DRUNELLA GRANDIS | 8 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 68 |
| EPEORUS ALBERTAE | 12 |
| HEPTAGENIA SOLIT | 4 |
| RHITHROGENA HAGE | 4 |
| TRICORYTHODES MI | 8 |
| CLAASSENI SABULO | 12 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 8 |
| SKWALA PARALLELA | 4 |
| RHAGOVELIA SP. | 8 |
| ARCTOPSYCHE GRAN | 12 |
| CHEUMATOPSYCHE | 372 |
| HYDROPSYCHE OCCI | 124 |
| SYMPHITOPS COCKE | 620 |
| PSYCHOMYIA FLAVI | 4 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 40 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 60 |
| POLYPEDILUM SP.A | 52 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA B | 12 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBU | 4 |
| SIMULIUM SP. | 20 |
| HEXATOMA SP. | 8 |

| 5/E-57 | |
|---|---|
| BAETIS HAGENI | 8 |
| BAETIS INSIGNIFI | 96 |
| BAETIS TRICAUDAT | 104 |
| SERRATELLA TIBIA | 32 |
| TIMPANOGA HECUBA | 4 |
| RHITHROGENA HAGE | 12 |
| TRICORYTHODES MI | 4 |
| CLAASSENI SABULO | 4 |
| SKWALA PARALLELA | 12 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 268 |
| HYDROPSYCHE OCCI | 80 |
| SYMPHITOPS COCKE | 276 |
| HYDROPTILA SP. | 8 |
| PSYCHOMYIA FLAVI | 20 |
| OPTIOSERVUS SPP. | 20 |
| ZAITZEVIA PARVUL | 24 |
| MICROPSECTR SP.C | 32 |
| POLYPEDILUM SP.A | 4 |
| EUKIEFFERIELLA B | 16 |
| ORTHOCLADIUS B | 8 |
| SIMULIUM SP. | 56 |
| HEXATOMA SP. | 4 |

Table 16. Continued

| 5/C-57 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 80 |
| BAETIS TRICAUDAT | 100 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 32 |
| EPEORUS ALBERTAE | 4 |
| RHITHROGENA HAGE | 8 |
| TRICORYTHODES MI | 8 |
| CLAASSENI SABULO | 8 |
| SKWALA PARALLELA | 4 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 20 |
| CHEUMATOPSYCHE | 404 |
| HYDROPSYCHE OCCI | 92 |
| SYMPHITOPS COCKE | 388 |
| WORMALDIA SP. | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 112 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 24 |
| POLYPEDILUM SP.A | 40 |
| EUKIEFFERIELLA B | 24 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 4 |
| CHELIFERA SP. | 4 |
| SIMULIUM SP. | 96 |
| HEXATOMA SP. | 16 |

| 5/D-57 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 236 |
| BAETIS TRICAUDAT | 120 |
| SERRATELLA TIBIA | 28 |
| RHITHROGENA HAGE | 8 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 8 |
| PTERONARCYS CALI | 4 |
| RHAGOVELIA SP. | 4 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 280 |
| HYDROPSYCHE OCCI | 88 |
| SYMPHITOPS COCKE | 328 |
| PSYCHOMYIA FLAVI | 16 |
| PARARGYRACTIS SP | 8 |
| OPTIOSERVUS SPP. | 20 |
| ZAITZEVIA PARVUL | 68 |
| MICROPSECTR SP.C | 28 |
| POLYPEDILUM SP.A | 32 |
| EUKIEFFERIELLA B | 60 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS B | 40 |
| SIMULIUM SP. | 68 |
| HEXATOMA SP. | 4 |

Table 16. Continued

| 6/A-57 | |
|---|---|
| BAETIS HAGENI | 12 |
| BAETIS INSIGNIFI | 112 |
| BAETIS TRICAUDAT | 52 |
| CENTROPTILU SP.A | 12 |
| ATTENELLA MARGAR | 14 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 32 |
| TIMPANOGA HECUBA | 4 |
| EPEORUS ALBERTAE | 6 |
| HEPTAGENIA SOLIT | 10 |
| NIXE CRIDDLEI | 4 |
| NIXE SIMPLICIOID | 14 |
| RHITHROGENA HAGE | 4 |
| PARALEPTOPHL BIC | 4 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 52 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 12 |
| PTERONARCYS CALI | 2 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 206 |
| HYDROPSYCHE OCCI | 66 |
| SYMPHITOPS COCKE | 156 |
| HYDROPTILA SP. | 2 |
| ZUMATRICHIA NOTO | 2 |
| PSYCHOMYIA FLAVI | 10 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 26 |
| ATHERIX VARIEGAT | 2 |
| MICROPSECTR SP.A | 6 |
| MICROPSECTR SP.C | 6 |
| MICROTENDIPES SP | 4 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 42 |
| TANYTARSUS SP. C | 6 |
| CORYNONEURA SP. | 2 |
| EUKIEFFERIELLA A | 2 |
| EUKIEFFERIELLA B | 2 |
| EUKIEFFERIELLA E | 18 |
| ORTHOCLADIUS B | 16 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 6 |
| PSECTROCLADIUS B | 8 |
| SYNORTHOCLADIUS | 6 |
| ABLABESMYIA SP. | 4 |
| SIMULIUM SP. | 4 |
| ANTOCHA SP. | 2 |
| HEXATOMA SP. | 8 |

| 6/B-57 | |
|---|---|
| BAETIS INSIGNIFI | 128 |
| BAETIS TRICAUDAT | 48 |
| CENTROPTILU SP.A | 6 |
| ATTENELLA MARGAR | 8 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 26 |
| TIMPANOGA HECUBA | 2 |
| EPEORUS ALBERTAE | 6 |
| HEPTAGENIA SOLIT | 8 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 4 |
| RHITHROGENA HAGE | 6 |
| PARALEPTOPHL BIC | 2 |
| PARALEPTOPHL DEB | 6 |
| TRICORYTHODES MI | 28 |
| CLAASSENI SABULO | 2 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 4 |
| PTERONARCELLA BA | 2 |
| PTERONARCYS CALI | 2 |
| PROTOPTILA SP. | 2 |
| ARCTOPSYCHE GRAN | 10 |
| CHEUMATOPSYCHE | 172 |
| HYDROPSYCHE OCCI | 12 |
| SYMPHITOPS COCKE | 92 |
| HYDROPTILA SP. | 2 |
| ZUMATRICHIA NOTO | 2 |
| OECETIS SP. A | 2 |
| PSYCHOMYIA FLAVI | 20 |
| ZAITZEVIA PARVUL | 20 |
| MICROPSECTR SP.A | 2 |
| MICROPSECTR SP.C | 4 |
| MICROTENDIPES SP | 4 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.A | 38 |
| PAGASTIA SP. | 2 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 2 |
| PSECTROCLADIUS B | 2 |
| CHELIFERA SP. | 2 |
| PROTANYDERUS SP. | 2 |
| HEXATOMA SP. | 4 |
| PACIFASTICUS SP. | 2 |

Table 16. Continued

| 6/C-57 | |
|---|---|
| BAETIS HAGENI | 8 |
| BAETIS INSIGNIFI | 128 |
| BAETIS TRICAUDAT | 58 |
| ATTENELLA MARGAR | 4 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 30 |
| EPEORUS ALBERTAE | 8 |
| HEPTAGENIA SOLIT | 6 |
| NIXE SIMPLICIOID | 2 |
| RHITHROGENA HAGE | 2 |
| PARALEPTOPHL BIC | 6 |
| TRICORYTHODES MI | 6 |
| HESPEROPERLA PAC | 2 |
| ISOGENOIDES ELON | 6 |
| SKWALA PARALLELA | 2 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 162 |
| HYDROPSYCHE OCCI | 22 |
| SYMPHITOPS COCKE | 134 |
| HYDROPTILA SP. | 8 |
| PSYCHOMYIA FLAVI | 14 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 16 |
| MICROPSECTR SP.C | 2 |
| POLYPEDILUM SP A | 18 |
| TANYTARSUS SP. C | 2 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS OBU | 4 |
| SYNORTHOCLADIUS | 4 |
| THIENEMANIELL SP | 2 |
| SIMULIUM SP. | 6 |
| ANTOCHA SP. | 2 |
| PACIFASTICUS SP. | 2 |

| 6/D-57 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 110 |
| BAETIS TRICAUDAT | 16 |
| CENTROPTILU SP.A | 2 |
| ATTENELLA MARGAR | 8 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 14 |
| TIMPANOGA HECUBA | 2 |
| EPEORUS ALBERTAE | 2 |
| HEPTAGENIA SOLIT | 2 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 8 |
| RHITHROGENA HAGE | 2 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 24 |
| CLAASSENI SABULO | 2 |
| ISOGENOIDES ELON | 2 |
| SKWALA PARALLELA | 4 |
| BRACHYCENTRUS OC | 2 |
| CHEUMATOPSYCHE | 136 |
| HYDROPSYCHE OCCI | 16 |
| SYMPHITOPS COCKE | 114 |
| HYDROPTILA SP. | 6 |
| OECETIS SP. A | 6 |
| PSYCHOMYIA FLAVI | 16 |
| NARPUS CONCOLOR | 2 |
| ZAITZEVIA PARVUL | 6 |
| ATHERIX VARIEGAT | 2 |
| MICROPSECTR SP.A | 2 |
| MICROPSECTR SP.C | 18 |
| MICROTENDIPES SP | 4 |
| POLYPEDILUM SP.A | 38 |
| TANYTARSUS SP. C | 2 |
| EUKIEFFERIELLA B | 2 |
| EUKIEFFERIELLA E | 6 |
| ORTHOCLADIUS B | 10 |
| ORTHOCLADIUS OBU | 10 |
| SYNORTHOCLADIUS | 2 |
| THIENEMANIELL SP | 2 |
| ANTOCHA SP. | 2 |

| | |
|---|---|
| 8/A-57 | |
| BAETIS HAGENI | 24 |
| BAETIS INSIGNIFI | 140 |
| BAETIS TRICAUDAT | 128 |
| CENTROPTILU SP.A | 4 |
| SERRATELLA TIBIA | 12 |
| TIMPANOGA HECUBA | 8 |
| NIXE SIMPLICIOID | 12 |
| PARALEPTOPHL BIC | 4 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 40 |
| ISOGENOIDES ELON | 8 |
| SKWALA PARALLELA | 8 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 24 |
| CHEUMATOPSYCHE | 488 |
| HYDROPSYCHE OCCI | 116 |
| SYMPHITOPS COCKE | 544 |
| ZUMATRICHIA NOTO | 4 |
| WORMALDIA SP. | 12 |
| PSYCHOMYIA FLAVI | 20 |
| PARARGYRACTIS SP | 32 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 28 |
| CHIRONOMUS SP. | 124 |
| MICROPSECTR SP.C | 4 |
| PHAENOPSECTRA SP | 8 |
| POLYPEDILUM SP.A | 100 |
| TANYTARSUS SP. A | 4 |
| TANYTARSUS SP. C | 4 |
| CRICOTOPUS SP. B | 16 |
| EUKIEFFERIELLA B | 52 |
| EUKIEFFERIELLA E | 16 |
| EUKIEFFERIELLA F | 4 |
| ORTHOCLADIUS B | 20 |
| ORTHOCLADIUS MAL | 16 |
| ORTHOCLADIUS OBU | 4 |
| SIMULIUM SP. | 12 |
| PHYSA SP. | 8 |
| OLIGOCHAETA | 4 |

| | |
|---|---|
| 8/B-57 | |
| BAETIS HAGENI | 36 |
| BAETIS INSIGNIFI | 76 |
| BAETIS TRICAUDAT | 148 |
| CENTROPTILU SP.A | 4 |
| SERRATELLA TIBIA | 8 |
| TIMPANOGA HECUBA | 8 |
| NIXE CRIDDLEI | 4 |
| NIXE SIMPLICIOID | 12 |
| PARALEPTOPHL BIC | 4 |
| PARALEPTOPHL DEB | 8 |
| TRICORYTHODES MI | 72 |
| CLAASSENI SABULO | 4 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 8 |
| ARCTOPSYCHE GRAN | 28 |
| CHEUMATOPSYCHE | 384 |
| HYDROPSYCHE OCCI | 84 |
| SYMPHITOPS COCKE | 324 |
| HYDROPTILA SP. | 4 |
| PSYCHOMYIA FLAVI | 12 |
| OPTIOSERVUS SPP. | 32 |
| ZAITZEVIA PARVUL | 20 |
| CHIRONOMUS SP. | 48 |
| MICROPSECTR SP.C | 4 |
| POLYPEDILUM SP.A | 156 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 12 |
| EUKIEFFERIELLA A | 12 |
| EUKIEFFERIELLA B | 24 |
| EUKIEFFERIELLA E | 8 |
| EUKIEFFERIELLA G | 8 |
| ORTHOCLADIUS B | 20 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 8 |
| PSECTROCLADIUS C | 8 |
| CHELIFERA SP. | 4 |
| SIMULIUM SP. | 8 |
| OLIGOCHAETA | 4 |

Table 16. Continued

| 8/C-57 | |
| --- | --- |
| BAETIS HAGENI | 32 |
| BAETIS INSIGNIFI | 76 |
| BAETIS TRICAUDAT | 84 |
| CENTROPTILU SP.A | 4 |
| ATTENELLA MARGAR | 4 |
| DRUNELLA DODDSI | 4 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 8 |
| TIMPANOGA HECUBA | 4 |
| EPEORUS ALBERTAE | 8 |
| NIXE SIMPLICIOID | 16 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 28 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 8 |
| SKWALA PARALLELA | 8 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 44 |
| CHEUMATOPSYCHE | 260 |
| HYDROPSYCHE OCCI | 60 |
| SYMPHITOPS COCKE | 236 |
| HYDROPTILA SP. | 32 |
| PSYCHOMYIA FLAVI | 8 |
| PARARGYRACTIS SP | 44 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 28 |
| CHIRONOMUS SP. | 4 |
| MICROPSECTR SP.C | 4 |
| POLYPEDILUM SP.A | 92 |
| CRICOTOPUS SP. B | 8 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 52 |
| EUKIEFFERIELLA E | 16 |
| ORTHOCLADIUS B | 36 |
| ORTHOCLADIUS MAL | 28 |
| ANTOCHA SP. | 8 |
| OLIGOCHAETA | 40 |

| 8/D-57 | |
| --- | --- |
| BAETIS HAGENI | 24 |
| BAETIS INSIGNIFI | 64 |
| BAETIS TRICAUDAT | 32 |
| CENTROPTILU SP.A | 4 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 8 |
| EPEORUS ALBERTAE | 4 |
| HEPTAGENIA SOLIT | 8 |
| TRICORYTHODES MI | 52 |
| MALENKA SP. | 4 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 16 |
| SKWALA PARALLELA | 12 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 12 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 40 |
| CHEUMATOPSYCHE | 332 |
| HYDROPSYCHE OCCI | 52 |
| SYMPHITOPS COCKE | 208 |
| HYDROPTILA SP | 28 |
| ZUMATRICHIA NOTO | 4 |
| PSYCHOMYIA FLAVI | 16 |
| PARARGYRACTIS SP | 28 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 24 |
| CHIRONOMUS SP. | 16 |
| POLYPEDILUM SP.A | 96 |
| CRICOTOPUS SP. B | 20 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA B | 28 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 24 |
| ORTHOCLADIUS MAL | 20 |
| ORTHOCLADIUS OBU | 12 |
| SYNORTHOCLADIUS | 4 |
| ANTOCHA SP. | 4 |
| OLIGOCHAETA | 8 |

| 9/A-57 | |
|---|---|
| BAETIS HAGENI | 16 |
| BAETIS INSIGNIFI | 64 |
| BAETIS TRICAUDAT | 4 |
| CENTROPTILU SP.A | 4 |
| ATTENELLA MARGAR | 20 |
| EPHEMERELLA INFR | 16 |
| SERRATELLA TIBIA | 12 |
| TIMPANOGA HECUBA | 12 |
| HEPTAGENIA SOLIT | 20 |
| NIXE SIMPLICIOID | 8 |
| RHITHROGENA HAGE | 12 |
| PARALEPTOPHL BIC | 16 |
| PARALEPTOPHL DEB | 8 |
| TRICORYTHODES MI | 148 |
| ISOGENOIDES ELON | 28 |
| SKWALA PARALLELA | 24 |
| PTERONARCYS CALI | 4 |
| CHEUMATOPSYCHE | 256 |
| HYDROPSYCHE OCCI | 36 |
| SYMPHITOPS COCKE | 68 |
| HYDROPTILA SP. | 24 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 32 |
| PARARGYRACTIS SP | 28 |
| OREODYTES SCITIL | 4 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 28 |
| HYDROCHUS SP. | 4 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 16 |
| MICROTENDIPES SP | 16 |
| PHAENOPSECTRA SP | 12 |
| POLYPEDILUM SP.A | 120 |
| TANYTARSUS SP. C | 24 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 8 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS B | 124 |
| ORTHOCLADIUS MAL | 12 |
| PSECTROCLADIUS B | 4 |
| PSECTROCLADIUS C | 4 |
| ABLABESMYIA SP. | 12 |
| CHELIFERA SP. | 12 |
| ANTOCHA SP. | 8 |

| 9/B-57 | |
|---|---|
| BAETIS HAGENI | 12 |
| BAETIS INSIGNIFI | 72 |
| BAETIS TRICAUDAT | 8 |
| ATTENELLA MARGAR | 16 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 8 |
| TIMPANOGA HECUBA | 4 |
| EPEORUS ALBERTAE | 8 |
| HEPTAGENIA SOLIT | 12 |
| NIXE SIMPLICIOID | 20 |
| PARALEPTOPHL BIC | 12 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 104 |
| CLAASSENI SABULO | 4 |
| HESPEROPERLA PAC | 8 |
| ISOGENOIDES ELON | 32 |
| SKWALA PARALLELA | 20 |
| BRACHYCENTRUS OC | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 296 |
| HYDROPSYCHE OCCI | 84 |
| SYMPHITOPS COCKE | 188 |
| HYDROPTILA SP. | 68 |
| ZUMATRICHIA NOTO | 4 |
| OECETIS SP. A | 20 |
| PSYCHOMYIA FLAVI | 32 |
| PARARGYRACTIS SP | 40 |
| OREODYTES SCITIL | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 40 |
| CHIRONOMUS SP. | 4 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 4 |
| MICROTENDIPES SP | 4 |
| POLYPEDILUM SP.A | 84 |
| TANYTARSUS SP. C | 4 |
| PAGASTIA SP. | 4 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 32 |
| ORTHOCLADIUS MAL | 8 |
| PSECTROCLADIUS B | 8 |
| PSECTROCLADIUS C | 4 |
| ABLABESMYIA SP. | 4 |

| 9/C-57 | |
|---|---|
| BAETIS HAGENI | 28 |
| BAETIS INSIGNIFI | 32 |
| BAETIS TRICAUDAT | 24 |
| ATTENELLA MARGAR | 28 |
| EPHEMERELLA INFR | 20 |
| SERRATELLA TIBIA | 8 |
| TIMPANOGA HECUBA | 4 |
| HEPTAGENIA SOLIT | 8 |
| NIXE CRIDDLEI | 4 |
| NIXE SIMPLICIOID | 8 |
| RHITHROGENA HAGE | 16 |
| PARALEPTOPHL BIC | 20 |
| TRICORYTHODES MI | 116 |
| HESPEROPERLA PAC | 4 |
| ISOGENOIDES ELON | 12 |
| ISOPERLA QUINQUE | 4 |
| SKWALA PARALLELA | 8 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 220 |
| HYDROPSYCHE OCCI | 68 |
| SYMPHITOPS COCKE | 100 |
| HYDROPTILA SP. | 44 |
| NEOTRICHIA SP. | 4 |
| PSYCHOMYIA FLAVI | 32 |
| PARARGYRACTIS SP | 28 |
| OREODYTES SCITIL | 4 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 56 |
| HYDROCHUS SP. | 8 |
| MICROPSECTR SP.C | 4 |
| MICROTENDIPES SP | 8 |
| PHAENOPSECTRA SP | 8 |
| POLYPEDILUM SP.A | 56 |
| TANYTARSUS SP. C | 4 |
| EUKIEFFERIELLA B | 8 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS B | 36 |
| ORTHOCLADIUS MAL | 8 |
| PSECTROCLADIUS B | 4 |
| WIEDEMANNIA SP. | 4 |
| HEXATOMA SP. | 4 |

| 9/D-57 | |
|---|---|
| BAETIS HAGENI | 20 |
| BAETIS INSIGNIFI | 72 |
| BAETIS TRICAUDAT | 28 |
| ATTENELLA MARGAR | 16 |
| EPHEMERELLA INFR | 16 |
| TIMPANOGA HECUBA | 12 |
| HEPTAGENIA SOLIT | 16 |
| NIXE SIMPLICIOID | 8 |
| RHITHROGENA HAGE | 12 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 48 |
| HESPEROPERLA PAC | 8 |
| ISOGENOIDES ELON | 28 |
| SKWALA PARALLELA | 8 |
| CHEUMATOPSYCHE | 188 |
| HYDROPSYCHE OCCI | 44 |
| SYMPHITOPS COCKE | 76 |
| HYDROPTILA SP. | 28 |
| NEOTRICHIA SP. | 4 |
| OECETIS SP. A | 12 |
| WORMALDIA SP. | 4 |
| PSYCHOMYIA FLAVI | 12 |
| PARARGYRACTIS SP | 24 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 28 |
| MICROPSECTR SP.C | 8 |
| POLYPEDILUM SP.A | 68 |
| TANYTARSUS SP. C | 4 |
| EUKIEFFERIELLA B | 16 |
| EUKIEFFERIELLA G | 4 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS MAL | 12 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 16 |
| PSECTROCLADIUS B | 4 |
| ABLABESMYIA SP. | 4 |

Table 16. Continued

| 10/A-57 | |
|---|---|
| BAETIS INSIGNIFI | 116 |
| BAETIS TRICAUDAT | 160 |
| ATTENELLA MARGAR | 40 |
| DRUNELLA GRANDIS | 32 |
| SERRATELLA TIBIA | 28 |
| NIXE SIMPLICIOID | 4 |
| RHITHROGENA HAGE | 60 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 24 |
| CLAASSENI SABULO | 12 |
| ISOGENOIDES ELON | 20 |
| SKWALA PARALLELA | 16 |
| PTERONARCELLA BA | 72 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 72 |
| HYDROPSYCHE OCCI | 80 |
| SYMPHITOPS COCKE | 44 |
| HYDROPTILA SP. | 12 |
| NEOTRICHIA SP. | 4 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 160 |
| ZAITZEVIA PARVUL | 124 |
| MICROPSECTR SP.A | 24 |
| MICROPSECTR SP.C | 28 |
| POLYPEDILUM SP.A | 104 |
| PAGASTIA SP. | 4 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA B | 24 |
| EUKIEFFERIELLA E | 16 |
| EUKIEFFERIELLA G | 4 |
| ORTHOCLADIUS MAL | 4 |
| PSECTROCLADIUS B | 4 |
| SYNORTHOCLADIUS | 4 |
| THIENEMANIELL SP | 4 |
| ABLABESMYIA SP. | 16 |
| SIMULIUM SP. | 212 |
| OLIGOCHAETA | 4 |
| TURBELLARI | 4 |

| 10/B-57 | |
|---|---|
| BAETIS INSIGNIFI | 88 |
| BAETIS TRICAUDAT | 40 |
| ATTENELLA MARGAR | 20 |
| DRUNELLA GRANDIS | 28 |
| SERRATELLA TIBIA | 36 |
| RHITHROGENA HAGE | 56 |
| TRICORYTHODES MI | 12 |
| CLAASSENI SABULO | 12 |
| SKWALA PARALLELA | 16 |
| PTERONARCELLA BA | 40 |
| PROTOPTILA SP. | 4 |
| ARCTOPSYCHE GRAN | 20 |
| CHEUMATOPSYCHE | 132 |
| HYDROPSYCHE OCCI | 80 |
| SYMPHITOPS COCKE | 44 |
| HYDROPTILA SP. | 4 |
| NEOTRICHIA SP. | 8 |
| ZUMATRICHIA NOTO | 4 |
| OPTIOSERVUS SPP. | 96 |
| ZAITZEVIA PARVUL | 80 |
| MICROPSECTR SP.A | 24 |
| MICROPSECTR SP.C | 28 |
| POLYPEDILUM SP.A | 48 |
| EUKIEFFERIELLA B | 16 |
| EUKIEFFERIELLA E | 8 |
| EUKIEFFERIELLA G | 4 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 4 |
| CHELIFERA SP. | 8 |
| SIMULIUM SP. | 240 |
| ANTOCHA SP. | 4 |
| OLIGOCHAETA LUMB | 8 |
| TURBELLARI | 4 |

| 10/C-57 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 92 |
| BAETIS TRICAUDAT | 72 |
| ATTENELLA MARGAR | 108 |
| DRUNELLA GRANDIS | 28 |
| EPHEMERELLA INFR | 8 |
| SERRATELLA TIBIA | 52 |
| NIXE CRIDDLEI | 4 |
| NIXE SIMPLICIOID | 4 |
| RHITHROGENA HAGE | 76 |
| PARALEPTOPHL BIC | 4 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 12 |
| CLAASSENI SABULO | 16 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 12 |
| PTERONARCELLA BA | 64 |
| BRACHYCENTRUS OC | 4 |
| PROTOPTILA SP. | 4 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 56 |
| HYDROPSYCHE OCCI | 52 |
| SYMPHITOPS COCKE | 120 |
| HYDROPTILA SP. | 28 |
| ZUMATRICHIA NOTO | 4 |
| PARARGYRACTIS SP | 8 |
| OPTIOSERVUS SPP. | 152 |
| ZAITZEVIA PARVUL | 44 |
| ATHERIX VARIEGAT | 4 |
| MICROPSECTR SP.A | 60 |
| MICROPSECTR SP.C | 4 |
| MICROTENDIPES SP | 8 |
| POLYPEDILUM SP.A | 72 |
| EUKIEFFERIELLA B | 28 |
| EUKIEFFERIELLA E | 20 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS OBU | 4 |
| ABLABESMYIA SP. | 8 |
| SIMULIUM SP. | 44 |
| ANTOCHA SP. | 4 |
| OLIGOCHAETA LUMB | 8 |

| 10/D-57 | |
|---|---|
| BAETIS INSIGNIFI | 120 |
| BAETIS TRICAUDAT | 160 |
| ATTENELLA MARGAR | 44 |
| DRUNELLA GRANDIS | 48 |
| SERRATELLA TIBIA | 84 |
| EPEORUS ALBERTAE | 4 |
| RHITHROGENA HAGE | 48 |
| TRICORYTHODES MI | 12 |
| CLAASSENI SABULO | 40 |
| ISOGENOIDES ELON | 16 |
| SKWALA PARALLELA | 28 |
| PTERONARCELLA BA | 68 |
| BRACHYCENTRUS OC | 16 |
| ARCTOPSYCHE GRAN | 32 |
| CHEUMATOPSYCHE | 60 |
| HYDROPSYCHE OCCI | 56 |
| SYMPHITOPS COCKE | 68 |
| HYDROPTILA SP. | 4 |
| NEOTRICHIA SP. | 4 |
| OPTIOSERVUS SPP. | 120 |
| ZAITZEVIA PARVUL | 124 |
| MICROPSECTR SP.A | 32 |
| MICROPSECTR SP.C | 28 |
| POLYPEDILUM SP.A | 116 |
| POTTHASTIA SP. | 4 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA B | 8 |
| EUKIEFFERIELLA E | 20 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 8 |
| THIENEMANIELL SP | 8 |
| CHELIFERA SP. | 8 |
| SIMULIUM SP. | 36 |
| OLIGOCHAETA LUMB | 8 |
| TURBELLARI | 4 |

Table 16. Continued

| 11/A-57 | |
|---|---|
| BAETIS HAGENI | 2 |
| BAETIS INSIGNIFI | 256 |
| BAETIS TRICAUDAT | 116 |
| ATTENELLA MARGAR | 10 |
| DRUNELLA GRANDIS | 2 |
| SERRATELLA TIBIA | 10 |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 30 |
| TRICORYTHODES MI | 6 |
| CALINEURIA CALIF | 4 |
| PTERONARCELLA BA | 10 |
| PTERONARCYS CALI | 4 |
| ARCTOPSYCHE GRAN | 34 |
| CHEUMATOPSYCHE | 56 |
| HYDROPSYCHE OCCI | 170 |
| SYMPHITOPS COCKE | 20 |
| OECETIS SP. A | 2 |
| OPTIOSERVUS SPP. | 14 |
| ZAITZEVIA PARVUL | 10 |
| ATHERIX VARIEGAT | 30 |
| MICROPSECTR SP.A | 10 |
| MICROPSECTR SP.C | 42 |
| PHAENOPSECTRA SP | 12 |
| POLYPEDILUM SP.A | 20 |
| TANYTARSUS SP. C | 8 |
| EUKIEFFERIELLA A | 2 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS OBU | 4 |
| ABLABESMYIA SP. | 2 |
| CHELIFERA SP. | 2 |
| SIMULIUM SP. | 20 |
| PROTANYDERUS SP. | 2 |
| HEXATOMA SP. | 14 |

| 11/B-57 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 226 |
| BAETIS TRICAUDAT | 124 |
| ATTENELLA MARGAR | 18 |
| DRUNELLA GRANDIS | 2 |
| SERRATELLA TIBIA | 28 |
| RHITHROGENA HAGE | 52 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 10 |
| CALINEURIA CALIF | 4 |
| CLAASSENI SABULO | 22 |
| PTERONARCELLA BA | 34 |
| ARCTOPSYCHE GRAN | 14 |
| CHEUMATOPSYCHE | 104 |
| HYDROPSYCHE OCCI | 200 |
| SYMPHITOPS COCKE | 24 |
| OPTIOSERVUS SPP. | 18 |
| ZAITZEVIA PARVUL | 30 |
| ATHERIX VARIEGAT | 44 |
| MICROPSECTR SP.A | 20 |
| MICROPSECTR SP.C | 18 |
| PHAENOPSECTRA SP | 20 |
| POLYPEDILUM SP.A | 44 |
| TANYTARSUS SP. C | 4 |
| EUKIEFFERIELLA B | 18 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 2 |
| ABLABESMYIA SP. | 6 |
| CHELIFERA SP. | 2 |
| SIMULIUM SP. | 276 |
| HEXATOMA SP. | 14 |

| 11/C-57 | |
|---|---|
| BAETIS HAGENI | 10 |
| BAETIS INSIGNIFI | 510 |
| BAETIS TRICAUDAT | 216 |
| ATTENELLA MARGAR | 32 |
| DRUNELLA GRANDIS | 6 |
| SERRATELLA TIBIA | 24 |
| TIMPANOGA HECUBA | 2 |
| NIXE SIMPLICIOID | 2 |
| RHITHROGENA HAGE | 112 |
| TRICORYTHODES MI | 16 |
| CLAASSENI SABULO | 20 |
| ISOGENOIDES ELON | 6 |
| SKWALA PARALLELA | 6 |
| PTERONARCELLA BA | 32 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 44 |
| CHEUMATOPSYCHE | 84 |
| HYDROPSYCHE OCCI | 302 |
| SYMPHITOPS COCKE | 18 |
| ZUMATRICHIA NOTO | 2 |
| HYDROPTILA SP. | 2 |
| OPTIOSERVUS SPP. | 28 |
| ZAITZEVIA PARVUL | 54 |
| ATHERIX VARIEGAT | 44 |
| MICROPSECTR SP.A | 34 |
| MICROPSECTR SP.C | 20 |
| MICROTENDIPES SP | 6 |
| PHAENOPSECTRA SP | 36 |
| POLYPEDILUM SP.A | 78 |
| TANYTARSUS SP. C | 20 |
| EUKIEFFERIELLA B | 4 |
| EUKIEFFERIELLA E | 10 |
| HETEROTRISSOCLAD | 6 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 8 |
| PSECTROCLADIUS B | 2 |
| ABLABESMYIA SP. | 12 |
| CHELIFERA SP. | 2 |
| SIMULIUM SP. | 120 |
| HEXATOMA SP. | 46 |

| 11/D-57 | |
|---|---|
| BAETIS HAGENI | 2 |
| BAETIS INSIGNIFI | 412 |
| BAETIS TRICAUDAT | 90 |
| ATTENELLA MARGAR | 24 |
| DRUNELLA GRANDIS | 2 |
| SERRATELLA TIBIA | 16 |
| NIXE SIMPLICIOID | 12 |
| RHITHROGENA HAGE | 24 |
| TRICORYTHODES MI | 10 |
| CLAASSENI SABULO | 8 |
| ISOGENOIDES ELON | 2 |
| PTERONARCELLA BA | 22 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 28 |
| CHEUMATOPSYCHE | 96 |
| HYDROPSYCHE OCCI | 226 |
| SYMPHITOPS COCKE | 34 |
| OECETIS SP. A | 2 |
| OPTIOSERVUS SPP. | 18 |
| ZAITZEVIA PARVUL | 18 |
| ATHERIX VARIEGAT | 60 |
| MICROPSECTR SP.A | 16 |
| MICROPSECTR SP.C | 40 |
| MICROTENDIPES SP | 4 |
| PHAENOPSECTRA SP | 20 |
| POLYPEDILUM SP.A | 24 |
| TANYTARSUS SP. C | 12 |
| EUKIEFFERIELLA B | 10 |
| EUKIEFFERIELLA E | 6 |
| ORTHOCLADIUS MAL | 6 |
| ORTHOCLADIUS OBU | 4 |
| PSECTROCLADIUS B | 4 |
| ABLABESMYIA SP. | 8 |
| CHELIFERA SP. | 2 |
| SIMULIUM SP. | 12 |
| PROTANYDERUS SP. | 2 |
| HEXATOMA SP. | 26 |

Table 16. Continued

| 13/A-57 | |
|---|---|
| BAETIS HAGENI | 2 |
| BAETIS INSIGNIFI | 118 |
| BAETIS TRICAUDAT | 70 |
| ATTENELLA MARGAR | 76 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 6 |
| HEPTAGENIA SOLIT | 2 |
| NIXE SIMPLICIOID | 28 |
| RHITHROGENA HAGE | 18 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 28 |
| CLAASSENI SABULO | 12 |
| ISOGENOIDES ELON | 30 |
| ISOPERLA QUINQUE | 2 |
| SKWALA PARALLELA | 8 |
| PTERONARCELLA BA | 2 |
| BRACHYCENTRUS OC | 6 |
| ARCTOPSYCHE GRAN | 6 |
| CHEUMATOPSYCHE | 90 |
| HYDROPSYCHE OCCI | 88 |
| SYMPHITOPS COCKE | 46 |
| HYDROPTILA SP. | 10 |
| ZUMATRICHIA NOTO | 4 |
| OECETIS SP. A | 10 |
| OPTIOSERVUS SPP. | 24 |
| ZAITZEVIA PARVUL | 26 |
| ATHERIX VARIEGAT | 8 |
| MICROPSECTR SP.A | 24 |
| MICROPSECTR SP.C | 8 |
| MICROTENDIPES SP | 18 |
| PHAENOPSECTRA SP | 6 |
| POLYPEDILUM SP.A | 32 |
| TANYTARSUS SP. C | 4 |
| EUKIEFFERIELLA B | 12 |
| EUKIEFFERIELLA E | 10 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS OBU | 6 |
| PSECTROCLADIUS B | 10 |
| ABLABESMYIA SP. | 10 |
| SIMULIUM SP. | 4 |
| HEXATOMA SP. | 6 |

| 13/B-57 | |
|---|---|
| BAETIS INSIGNIFI | 104 |
| BAETIS TRICAUDAT | 10 |
| CENTROPTILU SP.A | 6 |
| ATTENELLA MARGAR | 72 |
| HEPTAGENIA SOLIT | 8 |
| NIXE SIMPLICIOID | 50 |
| RHITHROGENA HAGE | 18 |
| TRICORYTHODES MI | 22 |
| CALINEURIA CALIF | 4 |
| CLAASSENI SABULO | 6 |
| ISOGENOIDES ELON | 20 |
| SKWALA PARALLELA | 10 |
| PTERONARCELLA BA | 4 |
| PTERONARCYS CALI | 4 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 10 |
| CHEUMATOPSYCHE | 64 |
| HYDROPSYCHE OCCI | 62 |
| SYMPHITOPS COCKE | 38 |
| HYDROPTILA SP. | 12 |
| CERACLEA SP. | 4 |
| OECETIS SP. A | 4 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 14 |
| HYDROCHUS SP. | 2 |
| ATHERIX VARIEGAT | 8 |
| MICROPSECTR SP.A | 32 |
| MICROPSECTR SP.C | 2 |
| MICROTENDIPES SP | 12 |
| PHAENOPSECTRA SP | 12 |
| POLYPEDILUM SP.A | 14 |
| TANYTARSUS SP. C | 6 |
| XENOCHIRONOMUS | 2 |
| CRICOTOPUS SP. B | 2 |
| EUKIEFFERIELLA B | 16 |
| HETEROTRISSOCLAD | 2 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 6 |
| ORTHOCLADIUS OBU | 2 |
| ABLABESMYIA SP. | 10 |
| HEXATOMA SP. | 4 |

| 13/C-57 | |
|---|---|
| BAETIS INSIGNIFI | 140 |
| BAETIS TRICAUDAT | 26 |
| CENTROPTILU SP.A | 2 |
| ATTENELLA MARGAR | 38 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 8 |
| HEPTAGENIA SOLIT | 4 |
| NIXE SIMPLICIOID | 40 |
| RHITHROGENA HAGE | 14 |
| TRICORYTHODES MI | 24 |
| CLAASSENI SABULO | 6 |
| ISOGENOIDES ELON | 24 |
| SKWALA PARALLELA | 2 |
| PTERONARCELLA BA | 2 |
| PTERONARCYS CALI | 2 |
| SIGARA SP. | 2 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 10 |
| CHEUMATOPSYCHE | 84 |
| HYDROPSYCHE OCCI | 76 |
| SYMPHITOPS COCKE | 28 |
| HYDROPTILA SP. | 10 |
| OECETIS SP. A | 2 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 16 |
| ATHERIX VARIEGAT | 2 |
| DICROTENDIP SP.C | 2 |
| MICROPSECTR SP.A | 26 |
| MICROPSECTR SP.C | 8 |
| MICROTENDIPES SP | 14 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 22 |
| TANYTARSUS SP. C | 8 |
| CORYNONEURA SP. | 2 |
| CRICOTOPUS SP. B | 2 |
| EUKIEFFERIELLA B | 16 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 6 |
| ORTHOCLADIUS OBU | 2 |
| ABLABESMYIA SP. | 2 |
| CHELIFERA SP. | 2 |
| HEXATOMA SP. | 20 |
| OLIGOCHAETA | 2 |

| 13/D-57 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 62 |
| BAETIS TRICAUDAT | 34 |
| ATTENELLA MARGAR | 62 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 4 |
| NIXE SIMPLICIOID | 42 |
| RHITHROGENA HAGE | 16 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 28 |
| CLAASSENI SABULO | 6 |
| ISOGENOIDES ELON | 14 |
| SKWALA PARALLELA | 12 |
| PTERONARCELLA BA | 2 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 48 |
| HYDROPSYCHE OCCI | 90 |
| SYMPHITOPS COCKE | 38 |
| HYDROPTILA SP. | 2 |
| OECETIS SP. A | 8 |
| PSYCHOMYIA FLAVI | 4 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 6 |
| ZAITZEVIA PARVUL | 8 |
| ATHERIX VARIEGAT | 2 |
| MICROPSECTR SP.A | 18 |
| MICROPSECTR SP.C | 6 |
| MICROTENDIPES SP | 6 |
| PHAENOPSECTRA SP | 6 |
| POLYPEDILUM SP.A | 34 |
| TANYTARSUS SP. C | 6 |
| EUKIEFFERIELLA B | 6 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 4 |
| PSECTROCLADIUS B | 6 |
| SYNORTHOCLADIUS | 2 |
| ABLABESMYIA SP. | 10 |
| HEXATOMA SP. | 6 |
| OLIGOCHAETA | 2 |
| OLIGOCHAETA LUMB | 2 |

| 14/A-57 | |
|---|---|
| BAETIS HAGENI | 2 |
| BAETIS INSIGNIFI | 70 |
| BAETIS TRICAUDAT | 24 |
| CENTROPTILU SP.A | 14 |
| ATTENELLA MARGAR | 82 |
| TIMPANOGA HECUBA | 4 |
| HEPTAGENIA SOLIT | 16 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 54 |
| RHITHROGENA HAGE | 6 |
| PARALEPTOPHL BIC | 26 |
| PARALEPTOPHL DEB | 16 |
| TRICORYTHODES MI | 110 |
| CLAASSENI SABULO | 8 |
| ISOGENOIDES ELON | 28 |
| SKWALA PARALLELA | 6 |
| OPHIOGOMPHUS SP. | 4 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 44 |
| HYDROPSYCHE OCCI | 10 |
| SYMPHITOPS COCKE | 8 |
| HYDROPTILA SP. | 18 |
| OECETIS SP. A | 6 |
| PSYCHOMYIA FLAVI | 2 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 2 |
| BRYCHIUS SP. | 4 |
| CRYPTOCHIRONOMUS | 2 |
| MICROPSECTR SP.A | 12 |
| MICROPSECTR SP.C | 12 |
| MICROTENDIPES SP | 128 |
| PHAENOPSECTRA SP | 48 |
| POLYPEDILUM SP.A | 26 |
| TANYTARSUS SP. C | 16 |
| CRICOTOPUS SP. B | 2 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 10 |
| SYNORTHOCLADIUS | 2 |
| ABLABESMYIA SP. | 12 |
| HEXATOMA SP. | 6 |
| OLIGOCHAETA | 24 |

| 14/B-57 | |
|---|---|
| BAETIS INSIGNIFI | 88 |
| CENTROPTILU SP.A | 4 |
| CAENIS SIMULANS | 2 |
| ATTENELLA MARGAR | 20 |
| EPHEMERELLA INFR | 2 |
| HEPTAGENIA SOLIT | 2 |
| NIXE SIMPLICIOID | 18 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 40 |
| ISOGENOIDES ELON | 2 |
| CHEUMATOPSYCHE | 24 |
| HYDROPSYCHE OCCI | 14 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 12 |
| ZUMATRICHIA NOTO | 2 |
| OECETIS SP. A | 2 |
| PSYCHOMYIA FLAVI | 2 |
| OREODYTES SCITIL | 2 |
| ZAITZEVIA PARVUL | 4 |
| ATHERIX VARIEGAT | 2 |
| MICROPSECTR SP.A | 10 |
| MICROTENDIPES SP | 32 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.A | 14 |
| TANYTARSUS SP. C | 6 |
| MONODIAMESA SP. | 2 |
| CORYNONEURA SP. | 2 |
| EUKIEFFERIELLA B | 6 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS NIG | 2 |
| ORTHOCLADIUS OBU | 8 |
| PSECTROCLADIUS B | 2 |
| SYNORTHOCLADIUS | 2 |
| ABLABESMYIA SP. | 4 |
| HEXATOMA SP. | 4 |
| OLIGOCHAETA | 18 |

| 14/C-57 | |
|---|---|
| BAETIS INSIGNIFI | 62 |
| BAETIS TRICAUDAT | 4 |
| CENTROPTILU SP.A | 2 |
| ATTENELLA MARGAR | 10 |
| EPEORUS ALBERTAE | 2 |
| HEPTAGENIA SOLIT | 4 |
| NIXE SIMPLICIOID | 24 |
| RHITHROGENA HAGE | 2 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 22 |
| CLAASSENI SABULO | 6 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 2 |
| CHEUMATOPSYCHE | 12 |
| HYDROPSYCHE OCCI | 6 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 18 |
| ZAITZEVIA PARVUL | 2 |
| MICROPSECTR SP.C | 2 |
| MICROTENDIPES SP | 28 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 14 |
| TANYTARSUS SP. C | 4 |
| EUKIEFFERIELLA B | 4 |
| ORTHOCLADIUS B | 10 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS OBU | 4 |
| PSECTROCLADIUS B | 2 |
| SYNORTHOCLADIUS | 2 |
| ABLABESMYIA SP. | 6 |
| CHELIFERA SP. | 2 |
| HYALELLA AZTECA | 2 |
| OLIGOCHAETA | 4 |

| 14/D-57 | |
|---|---|
| BAETIS INSIGNIFI | 106 |
| BAETIS TRICAUDAT | 2 |
| CAENIS SIMULANS | 2 |
| ATTENELLA MARGAR | 36 |
| SERRATELLA TIBIA | 2 |
| TIMPANOGA HECUBA | 4 |
| HEPTAGENIA SOLIT | 4 |
| NIXE CRIDDLEI | 8 |
| NIXE SIMPLICIOID | 42 |
| PARALEPTOPHL BIC | 20 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 78 |
| CALINEURIA CALI | 2 |
| CLAASSENI SABULO | 4 |
| ISOGENOIDES ELON | 18 |
| SKWALA PARALLELA | 4 |
| CHEUMATOPSYCHE | 24 |
| HYDROPSYCHE OCCI | 6 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 14 |
| ZUMATRICHIA NOTO | 2 |
| CERACLEA SP. | 2 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 8 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 4 |
| ZAITZEVIA PARVUL | 6 |
| BRYCHIUS SP. | 2 |
| MICROPSECTR SP.A | 8 |
| MICROPSECTR SP.C | 4 |
| MICROTENDIPES SP | 40 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.A | 6 |
| TANYTARSUS SP. C | 2 |
| CRICOTOPUS SP. B | 4 |
| EUKIEFFERIELLA A | 2 |
| ORTHOCLADIUS B | 6 |
| ORTHOCLADIUS OBU | 2 |
| PSECTROCLADIUS B | 6 |
| ABLABESMYIA SP. | 2 |
| LEBERTIA SP. | 2 |
| OLIGOCHAETA | 6 |

| 15/A-57 | |
|---|---|
| BAETIS INSIGNIFI | 54 |
| BAETIS TRICAUDAT | 2 |
| CENTROPTILU SP.A | 6 |
| ATTENELLA MARGAR | 46 |
| HEPTAGENIA SOLIT | 8 |
| NIXE CRIDDLEI | 6 |
| NIXE SIMPLICIOID | 34 |
| RHITHROGENA HAGE | 4 |
| PARALEPTOPHL BIC | 10 |
| PARALEPTOPHL DEB | 2 |
| TRICORYTHODES MI | 106 |
| CLAASSENI SABULO | 6 |
| ISOGENOIDES ELON | 32 |
| SIGARA SP. | 10 |
| BRACHYCENTRUS OC | 2 |
| CHEUMATOPSYCHE | 26 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 18 |
| ZUMATRICHIA NOTO | 2 |
| CERACLEA SP. | 2 |
| PSYCHOMYIA FLAVI | 2 |
| OREODYTES SCITIL | 10 |
| OPTIOSERVUS SPP. | 6 |
| ZAITZEVIA PARVUL | 2 |
| CRYPTOCHIRONOMUS | 2 |
| MICROPSECTR SP.A | 6 |
| MICROPSECTR SP.C | 24 |
| MICROTENDIPES SP | 18 |
| PHAENOPSECTRA SP | 10 |
| POLYPEDILUM SP.A | 28 |
| TANYTARSUS SP. C | 30 |
| CORYNONEURA SP. | 2 |
| CRICOTOPUS SP. B | 4 |
| ORTHOCLADIUS B | 8 |
| ORTHOCLADIUS OBH | 8 |
| PSECTROCLADIUS B | 2 |
| ABLABESMYIA SP. | 28 |

| 15/B-57 | |
|---|---|
| BAETIS HAGENI | 8 |
| BAETIS INSIGNIFI | 80 |
| BAETIS TRICAUDAT | 86 |
| CENTROPTILU SP.A | 2 |
| ATTENELLA MARGAR | 40 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 10 |
| TIMPANOGA HECUBA | 4 |
| HEPTAGENIA SOLIT | 6 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 60 |
| RHITHROGENA HAGE | 96 |
| PARALEPTOPHL DEB | 2 |
| AMELETUS VELOX | 2 |
| TRICORYTHODES MI | 34 |
| CLAASSENI SABULO | 50 |
| HESPEROPERLA PAC | 2 |
| ISOGENOIDES ELON | 70 |
| SKWALA PARALLELA | 12 |
| PTERONARCELLA BA | 12 |
| PROTOPTILA SP. | 2 |
| CHEUMATOPSYCHE | 64 |
| HYDROPSYCHE OCCI | 90 |
| SYMPHITOPS COCKE | 2 |
| OREODYTES SCITIL | 10 |
| OPTIOSERVUS SPP. | 16 |
| ZAITZEVIA PARVUL | 18 |
| MICROPSECTR SP.A | 24 |
| MICROPSECTR SP.C | 40 |
| MICROTENDIPES SP | 16 |
| PHAENOPSECTRA SP | 18 |
| POLYPEDILUM SP.A | 78 |
| TANYTARSUS SP. C | 20 |
| EUKIEFFERIELLA E | 4 |
| HETEROTRISSOCLAD | 2 |
| ORTHOCLADIUS B | 2 |
| PSECTROCLADIUS B | 4 |
| ABLABESMYIA SP. | 24 |
| CHELIFERA SP. | 2 |
| SIMULIUM SP. | 40 |
| HEXATOMA SP. | 4 |

| 15/C-57 | |
|---|---|
| BAETIS HAGENI | 2 |
| BAETIS INSIGNIFI | 92 |
| BAETIS TRICAUDAT | 6 |
| CENTROPTILU SP.A | 2 |
| ATTENELLA MARGAR | 60 |
| SERRATELLA TIBIA | 2 |
| HEPTAGENIA SOLIT | 2 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 60 |
| RHITHROGENA HAGE | 4 |
| PARALEPTOPHL BIC | 10 |
| PARALEPTOPHL DEB | 4 |
| TRICORYTHODES MI | 124 |
| ISOGENOIDES ELON | 12 |
| PTERONARCELLA BA | 2 |
| SIGARA SP. | 10 |
| BRACHYCENTRUS OC | 2 |
| ARCTOPSYCHE GRAN | 10 |
| CHEUMATOPSYCHE | 48 |
| HYDROPSYCHE OCCI | 30 |
| SYMPHITOPS COCKE | 8 |
| HYDROPTILA SP. | 30 |
| ZUMATRICHIA NOTO | 8 |
| PSYCHOMYIA FLAVI | 2 |
| PARARGYRACTIS SP | 2 |
| ZAITZEVIA PARVUL | 6 |
| CRYPTOCHIRONOMUS | 2 |
| MICROPSECTR SP.A | 10 |
| MICROPSECTR SP.C | 12 |
| MICROTENDIPES SP | 28 |
| POLYPEDILUM SP.A | 38 |
| TANYTARSUS SP. C | 12 |
| EUKIEFFERIELLA B | 2 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS B | 4 |
| ORTHOCLADIUS MAL | 2 |
| ORTHOCLADIUS NIG | 2 |
| ORTHOCLADIUS OBU | 10 |
| PSECTROCLADIUS B | 6 |
| SYNORTHOCLADIUS | 2 |
| ABLABESMYIA SP. | 16 |
| OLIGOCHAETA | 2 |

| 15/D-57 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 152 |
| BAETIS TRICAUDAT | 100 |
| ATTENELLA MARGAR | 40 |
| EPHEMERELLA INFR | 2 |
| SERRATELLA TIBIA | 8 |
| EPEORUS ALBERTAE | 4 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 32 |
| RHITHROGENA HAGE | 96 |
| PARALEPTOPHL BIC | 2 |
| TRICORYTHODES MI | 30 |
| CLAASSENI SABULO | 24 |
| ISOGENOIDES ELON | 34 |
| SKWALA PARALLELA | 6 |
| PTERONARCELLA BA | 4 |
| BRACHYCENTRUS OC | 4 |
| CHEUMATOPSYCHE | 86 |
| HYDROPSYCHE OCCI | 70 |
| SYMPHITOPS COCKE | 4 |
| HYDROPTILA SP. | 2 |
| OREODYTES SCITIL | 8 |
| OPTIOSERVUS SPP. | 16 |
| ZAITZEVIA PARVUL | 14 |
| CRYPTOCHIRONOMUS | 2 |
| MICROPSECTR SP.A | 26 |
| MICROPSECTR SP.C | 38 |
| MICROTENDIPES SP | 14 |
| PHAENOPSECTRA SP | 8 |
| POLYPEDILUM SP.A | 70 |
| TANYTARSUS SP. C | 28 |
| EUKIEFFERIELLA E | 8 |
| PSECTROCLADIUS B | 4 |
| ABLABESMYIA SP. | 12 |
| CHELIFERA SP. | 2 |
| PROTANYDERUS SP. | 2 |
| HEXATOMA SP. | 10 |

| 19/A-57 | |
|---|---|
| BAETIS INSIGNIFI | 72 |
| BAETIS TRICAUDAT | 24 |
| ATTENELLA MARGAR | 20 |
| DRUNELLA GRANDIS | 4 |
| EPEORUS ALBERTAE | 4 |
| HEPTAGENIA SOLIT | 28 |
| TRICORYTHODES MI | 4 |
| CLAASSENI SABULO | 4 |
| ISOGENOIDES ELON | 4 |
| SKWALA PARALLELA | 4 |
| PROTOPTILA SP. | 12 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 404 |
| HYDROPSYCHE OCCI | 184 |
| SYMPHITOPS COCKE | 56 |
| SYMPHITOPS SLOSS | 20 |
| HYDROPTILA SP. | 20 |
| ZUMATRICHIA NOTO | 4 |
| CERACLEA SP. | 12 |
| PSYCHOMYIA FLAVI | 12 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 16 |
| MICROPSECTR SP.A | 24 |
| MICROTENDIPES SP | 12 |
| POLYPEDILUM SP.A | 84 |
| XENOCHIRONOMUS | 8 |
| PAGASTIA SP. | 4 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS OBU | 8 |
| ABLABESMYIA SP. | 4 |

| 19/B-57 | |
|---|---|
| BAETIS INSIGNIFI | 72 |
| BAETIS TRICAUDAT | 24 |
| ATTENELLA MARGAR | 16 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 8 |
| EPEORUS ALBERTAE | 16 |
| HEPTAGENIA SOLIT | 28 |
| RHITHROGENA HAGE | 4 |
| TRICORYTHODES MI | 8 |
| CLAASSENI SABULO | 4 |
| SKWALA PARALLELA | 8 |
| OPHIOGOMPHUS SP. | 4 |
| PROTOPTILA SP. | 12 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 348 |
| HYDROPSYCHE OCCI | 152 |
| SYMPHITOPS COCKE | 72 |
| SYMPHITOPS SLOSS | 40 |
| HYDROPTILA SP. | 8 |
| ZUMATRICHIA NOTO | 4 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 20 |
| PARARGYRACTIS SP | 4 |
| OPTIOSERVUS SPP. | 12 |
| ZAITZEVIA PARVUL | 8 |
| MICROPSECTR SP.A | 16 |
| MICROTENDIPES SP | 16 |
| PHAENOPSECTRA SP | 8 |
| POLYPEDILUM SP.A | 104 |
| TANYTARSUS SP. C | 4 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA B | 8 |
| EUKIEFFERIELLA E | 20 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS MAL | 8 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 20 |
| PSECTROCLADIUS B | 4 |
| TURBELLARI | 4 |

Table 16. Continued

| 19/C-57 | |
|---|---|
| BAETIS INSIGNIFI | 92 |
| BAETIS TRICAUDAT | 76 |
| ATTENELLA MARGAR | 32 |
| DRUNELLA GRANDIS | 24 |
| SERRATELLA TIBIA | 8 |
| EPEORUS ALBERTAE | 4 |
| HEPTAGENIA SOLIT | 32 |
| NIXE SIMPLICIOID | 4 |
| BRACHYCENTRUS OC | 4 |
| PROTOPTILA SP. | 16 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 660 |
| HYDROPSYCHE OCCI | 312 |
| SYMPHITOPS COCKE | 104 |
| SYMPHITOPS SLOSS | 36 |
| HYDROPTILA SP. | 8 |
| LEUCOTRICHIA PIC | 4 |
| NEOTRICHIA SP. | 4 |
| ZUMATRICHIA NOTO | 4 |
| CERACLEA SP. | 4 |
| OECETIS SP. A | 16 |
| PSYCHOMYIA FLAVI | 16 |
| ZAITZEVIA PARVUL | 16 |
| MICROPSECTR SP.A | 40 |
| MICROPSECTR SP.C | 8 |
| MICROTENDIPES SP | 8 |
| POLYPEDILUM SP.A | 164 |
| TANYTARSUS SP. C | 4 |
| XENOCHIRONOMUS | 4 |
| EUKIEFFERIELLA A | 12 |
| EUKIEFFERIELLA E | 16 |
| ORTHOCLADIUS B | 12 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 8 |
| ANTOCHA SP. | 4 |
| TURBELARI | 24 |

| 19/D-57 | |
|---|---|
| BAETIS INSIGNIFI | 36 |
| BAETIS TRICAUDAT | 12 |
| ATTENELLA MARGAR | 8 |
| DRUNELLA GRANDIS | 4 |
| EPHEMERELLA INFR | 4 |
| SERRATELLA TIBIA | 8 |
| TIMPANOGA HECUBA | 4 |
| HEPTAGENIA SOLIT | 20 |
| ISOGENOIDES ELON | 4 |
| PROTOPTILA SP. | 20 |
| CHEUMATOPSYCHE | 520 |
| HYDROPSYCHE OCCI | 220 |
| SYMPHITOPS COCKE | 64 |
| SYMPHITOPS SLOSS | 32 |
| HYDROPTILA SP. | 4 |
| CERACLEA SP. | 8 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 16 |
| PARARGYRACTIS SP | 12 |
| OPTIOSERVUS SPP. | 8 |
| MICROPSECTR SP.A | 24 |
| MICROPSECTR SP.C | 4 |
| MICROTENDIPES SP | 8 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 88 |
| TANYTARSUS SP. C | 1.6 |
| CORYNONEURA SP. | 4 |
| EUKIEFFERIELLA B | 20 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS B | 20 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 24 |
| ABLABESMYIA SP. | 8 |
| TURBELLARI | 16 |

| 21/A-57 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 32 |
| BAETIS TRICAUDAT | 28 |
| ATTENELLA MARGAR | 8 |
| EPHEMERELLA INFR | 8 |
| SERRATELLA TIBIA | 28 |
| TIMPANOGA HECUBA | 12 |
| EPEORUS ALBERTAE | 12 |
| HEPTAGENIA SOLIT | 8 |
| CLAASSENI SABULO | 4 |
| ISOGENOIDES ELON | 4 |
| PTERONARCYS CALI | 4 |
| BRACHYCENTRUS OC | 8 |
| ARCTOPSYCHE GRAN | 16 |
| CHEUMATOPSYCHE | 272 |
| HYDROPSYCHE OCCI | 20 |
| SYMPHITOPS COCKE | 12 |
| SYMPHITOPS SLOSS | 16 |
| HYDROPTILA SP. | 48 |
| NEOTRICHIA SP. | 8 |
| CERACLEA SP. | 12 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 12 |
| ZAITZEVIA PARVUL | 8 |
| CRYPTOCHIRONOMUS | 4 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 32 |
| MICROTENDIPES SP | 88 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 152 |
| EUKIEFFERIELLA E | 20 |
| ORTHOCLADIUS NIG | 8 |
| ORTHOCLADIUS OBU | 40 |
| SYNORTHOCLADIUS | 4 |
| ABLABESMYIA SP. | 40 |
| SIMULIUM SP. | 4 |
| TURBELLARI | 4 |

| 21/B-57 | |
|---|---|
| BAETIS HAGENI | 4 |
| BAETIS INSIGNIFI | 40 |
| BAETIS TRICAUDAT | 16 |
| ATTENELLA MARGAR | 16 |
| EPHEMERELLA INFR | 16 |
| SERRATELLA TIBIA | 16 |
| TIMPANOGA HECUBA | 4 |
| EPEORUS ALBERTAE | 16 |
| HEPTAGENIA SOLIT | 12 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 8 |
| CLAASSENI SABULO | 8 |
| ISOGENOIDES ELON | 12 |
| PTERONARCYS CALI | 4 |
| SIGARA SP. | 4 |
| BRACHYCENTRUS OC | 12 |
| ARCTOPSYCHE GRAN | 8 |
| CHEUMATOPSYCHE | 268 |
| HYDROPSYCHE OCCI | 28 |
| SYMPHITOPS SLOSS | 16 |
| HYDROPTILA SP. | 12 |
| CERACLEA SP. | 4 |
| OECETIS SP. A | 4 |
| PSYCHOMYIA FLAVI | 4 |
| ZAITZEVIA PARVUL | 4 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 8 |
| MICROTENDIPES SP | 80 |
| POLYPEDILUM SP.A | 40 |
| EUKIEFFERIELLA A | 8 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS NIG | 36 |
| ORTHOCLADIUS OBU | 16 |
| ABLABESMYIA SP. | 8 |
| OLIGOCHAETA | 4 |
| TURBELLARI | 16 |

| 21/C-57 | |
|---|---|
| BAETIS HAGENI | 8 |
| BAETIS INSIGNIFI | 8 |
| BAETIS TRICAUDAT | 12 |
| ATTENELLA MARGAR | 4 |
| DRUNELLA GRANDIS | 4 |
| SERRATELLA TIBIA | 12 |
| TIMPANOGA HECUBA | 8 |
| EPEORUS ALBERTAE | 8 |
| HEPTAGENIA SOLIT | 8 |
| PARALEPTOPHL DEB | 4 |
| CLAASSENI SABULO | 4 |
| ISOGENOIDES ELON | 4 |
| BRACHYCENTRUS OC | 8 |
| ARCTOPSYCHE GRAN | 4 |
| CHEUMATOPSYCHE | 212 |
| HYDROPSYCHE OCCI | 40 |
| SYMPHITOPS COCKE | 20 |
| SYMPHITOPS SLOSS | 8 |
| HYDROPTILA SP. | 16 |
| LEUCOTRICHIA PIC | 4 |
| NEOTRICHIA SP. | 4 |
| CERACLEA SP. | 20 |
| OECETIS SP. A | 12 |
| PSYCHOMYIA FLAVI | 8 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 12 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 8 |
| MICROTENDIPES SP | 52 |
| PHAENOPSECTRA SP | 4 |
| POLYPEDILUM SP.A | 48 |
| EUKIEFFERIELLA E | 12 |
| EUKIEFFERIELLA G | 4 |
| ORTHOCLADIUS NIG | 4 |
| ORTHOCLADIUS OBU | 16 |
| ABLABESMYIA SP. | 8 |
| SIMULIUM SP. | 8 |
| OLIGOCHAETA LUMB | 4 |
| TURBELLARI | 24 |

| 21/D-57 | |
|---|---|
| BAETIS HAGENI | 12 |
| BAETIS INSIGNIFI | 12 |
| BAETIS TRICAUDAT | 20 |
| DRUNELLA GRANDIS | 12 |
| EPHEMERELLA INFR | 12 |
| SERRATELLA TIBIA | 16 |
| TIMPANOGA HECUBA | 16 |
| EPEORUS ALBERTAE | 12 |
| HEPTAGENIA SOLIT | 16 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 4 |
| SKWALA PARALLELA | 4 |
| BRACHYCENTRUS OC | 8 |
| PROTOPTILA SP. | 4 |
| ARCTOPSYCHE GRAN | 20 |
| CHEUMATOPSYCHE | 396 |
| HYDROPSYCHE OCCI | 64 |
| SYMPHITOPS COCKE | 32 |
| SYMPHITOPS SLOSS | 16 |
| HYDROPTILA SP. | 136 |
| LEPIDOSTOMA SP.A | 4 |
| CERACLEA SP. | 20 |
| PSYCHOMYIA FLAVI | 8 |
| OPTIOSERVUS SPP. | 8 |
| ZAITZEVIA PARVUL | 24 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 24 |
| MICROTENDIPES SP | 112 |
| POLYPEDILUM SP.A | 228 |
| XENOCHIRONOMUS | 4 |
| PAGASTIA SP. | 4 |
| CORYNONEURA SP. | 4 |
| EUKIEFFERIELLA A | 4 |
| EUKIEFFERIELLA E | 12 |
| ORTHOCLADIUS MAL | 4 |
| ORTHOCLADIUS NIG | 72 |
| ORTHOCLADIUS OBU | 196 |
| PSECTROCLADIUS B | 20 |
| SYNORTHOCLADIUS | 8 |
| ABLABESMYIA SP. | 64 |
| OLIGOCHAETA LUMB | 4 |
| TURBELLARI | 12 |

Table 16. Continued

| 23/A-57 | |
|---|---|
| BAETIS HAGENI | 1 |
| BAETIS INSIGNIFI | 2 |
| BAETIS TRICAUDAT | 2 |
| CENTROPTILU SP.B | 4 |
| CAENIS SIMULANS | 1 |
| HEPTAGENIA SOLIT | 5 |
| NIXE SIMPLICIOID | 2 |
| STENONEMA SP. | 6 |
| PARALEPTOPHL BIC | 19 |
| PARALEPTOPHL DEB | 13 |
| CHEUMATOPSYCHE | 1 |
| LEPIDOSTOMA SP.A | 1 |
| POLYCENTROPUS SP | 1 |
| OREODYTES SCITIL | 1 |
| DUBIRAPHIA SP. | 6 |
| MICROTENDIPES SP | 3 |
| PARACHIRONOMUS | 2 |
| PAGASTIA SP. | 1 |
| CORYNONEURA SP. | 1 |
| ORTHOCLADIUS OBU | 11 |
| PSECTROCLADIUS B | 1 |
| SYNORTHOCLADIUS | 2 |
| HYALELLA AZTECA | 7 |
| GYRAULUS SP. | 10 |
| PHYSA SP. | 19 |
| OLIGOCHAETA | 2 |
| OLIGOCHAETA LUMB | 10 |
| TURBELLARI | 1 |

| 23/B-57 | |
|---|---|
| BAETIS INSIGNIFI | 2 |
| BAETIS TRICAUDAT | 5 |
| CENTROPTILU SP.B | 1 |
| HEPTAGENIA SOLIT | 1 |
| NIXE CRIDDLEI | 1 |
| STENONEMA SP. | 2 |
| PARALEPTOPHL BIC | 3 |
| PARALEPTOPHL DEB | 2 |
| OPHIOGOMPHUS SP. | 1 |
| LEPIDOSTOMA SP.A | 1 |
| OREODYTES SCITIL | 1 |
| DUBIRAPHIA SP. | 8 |
| ZAITZEVIA PARVUL | 1 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.C | 6 |
| MICROTENDIPES SP | 1 |
| CORYNONEURA SP. | 1 |
| EUKIEFFERIELLA E | 1 |
| ORTHOCLADIUS OBU | 9 |
| SYNORTHOCLADIUS | 3 |
| THIENEMANIELL SP | 1 |
| HYALELLA AZTECA | 15 |
| GYRAULUS SP. | 12 |
| LYMNAEA SP. | 2 |
| PHYSA SP. | 23 |
| PISIDIUM SP. | 1 |
| OLIGOCHAETA | 2 |
| OLIGOCHAETA LUMB | 8 |
| TURBELLARI | 2 |

| 23/C-57 | |
|---|---|
| BAETIS TRICAUDAT | 5 |
| CENTROPTILU SP.B | 1 |
| ATTENELLA MARGAR | 1 |
| NIXE CRIDDLEI | 1 |
| NIXE SIMPLICIOID | 1 |
| STENONEMA SP. | 8 |
| PARALEPTOPHL BIC | 4 |
| PARALEPTOPHL DEB | 1 |
| LEPIDOSTOMA SP.A | 1 |
| CERACLEA SP. | 8 |
| MYSTACIDES SP. | 1 |
| POLYCENTROPUS SP | 1 |
| OREODYTES SCITIL | 1 |
| DUBIRAPHIA SP. | 2 |
| ZAITZEVIA PARVUL | 1 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.C | 2 |
| MICROTENDIPES SP | 9 |
| ORTHOCLADIUS OBU | 5 |
| THIENEMANIELL SP | 1 |
| CHELIFERA SP. | 1 |
| HYALELLA AZTECA | 9 |
| GYRAULUS SP. | 28 |
| LYMNAEA SP. | 1 |
| PHYSA SP. | 41 |
| OLIGOCHAETA LUMB | 11 |
| TURBELLARI | 1 |

| 23/D-57 | |
|---|---|
| BAETIS TRICAUDAT | 5 |
| NIXE CRIDDLEI | 2 |
| NIXE SIMPLICIOID | 9 |
| STENONEMA SP. | 18 |
| PARALEPTOPHL BIC | 12 |
| PARALEPTOPHL DEB | 3 |
| ISOGENOIDES ELON | 1 |
| CHEUMATOPSYCHE | 8 |
| HYDROPTILA SP. | 2 |
| LEPIDOSTOMA SP.A | 4 |
| CERACLEA SP. | 3 |
| PARARGYRACTIS SP | 1 |
| OREODYTES SCITIL | 1 |
| DUBIRAPHIA SP. | 2 |
| OPTIOSERVUS SPP. | 1 |
| DICROTENDIP SP.B | 1 |
| MICROPSECTR SP.C | 1 |
| MICROTENDIPES SP | 14 |
| PAGASTIA SP. | 1 |
| ORTHOCLADIUS OBU | 2 |
| PROCLADIUS SP. A | 1 |
| CHELIFERA SP. | 1 |
| WIEDEMANNIA SP. | 1 |
| SIMULIUM SP. | 1 |
| HYALELLA AZTECA | 17 |
| GYRAULUS SP. | 22 |
| LYMNAEA SP. | 3 |
| PHYSA SP. | 31 |
| OLIGOCHAETA LUMB | 5 |
| HELOBDELLA SP. | 1 |
| TURBELLARI | 2 |

| 24/A-57 | |
|---|---|
| BAETIS INSIGNIFI | 16 |
| BAETIS TRICAUDAT | 4 |
| DRUNELLA GRANDIS | 2 |
| EPHEMERELLA INFR | 1 |
| HEPTAGENIA SOLIT | 3 |
| RHITHROGENA HAGE | 2 |
| STENONEMA SP. | 25 |
| TRICORYTHODES MI | 2 |
| OPHIOGOMPHUS SP. | 1 |
| PROTOPTILA SP. | 4 |
| CHEUMATOPSYCHE | 133 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | 23 |
| HYDROPTILA SP. | 2 |
| LEUCOTRICHIA PIC | 1 |
| ZUMATRICHIA NOTO | 1 |
| CERACLEA SP. | 29 |
| PSYCHOMYIA FLAVI | 3 |
| OPTIOSERVUS SPP. | 1 |
| ZAITZEVIA PARVUL | 12 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.A | 16 |
| MICROPSECTR SP.C | 12 |
| MICROTENDIPES SP | 33 |
| POLYPEDILUM SP.A | 21 |
| TANYTARSUS SP. C | 23 |
| XENOCHIRONOMUS | 3 |
| PAGASTIA SP. | 2 |
| CRICOTOPUS SP. B | 1 |
| EUKIEFFERIELLA A | 2 |
| EUKIEFFERIELLA B | 2 |
| EUKIEFFERIELLA E | 38 |
| ORTHOCLADIUS B | 1 |
| ORTHOCLADIUS MAL | 1 |
| ORTHOCLADIUS NIG | 3 |
| ORTHOCLADIUS OBU | 28 |
| PSECTROCLADIUS B | 1 |
| SYNORTHOCLADIUS | 3 |
| ABLABESMYIA SP. | 2 |
| SIMULIUM SP. | 10 |
| FERRISSIA SP. | 5 |
| LYMNAEA SP. | 51 |
| OLIGOCHAETA | 1 |

| 24/B-57 | |
|---|---|
| BAETIS INSIGNIFI | 5 |
| BAETIS TRICAUDAT | 4 |
| DRUNELLA GRANDIS | 1 |
| STENONEMA SP. | 4 |
| TRICORYTHODES MI | 6 |
| PROTOPTILA SP. | 1 |
| ARCTOPSYCHE GRAN | 2 |
| CHEUMATOPSYCHE | 68 |
| HYDROPSYCHE OCCI | 2 |
| SYMPHITOPS COCKE | 10 |
| CERACLEA SP. | 6 |
| NARPUS CONCOLOR | 1 |
| OPTIOSERVUS SPP. | 1 |
| ZAITZEVIA PARVUL | 8 |
| MICROPSECTR SP.A | 3 |
| MICROPSECTR SP.C | 3 |
| MICROTENDIPES SP | 51 |
| POLYPEDILUM SP.A | 5 |
| TANYTARSUS SP. C | 1 |
| XENOCHIRONOMUS | 2 |
| PAGASTIA SP. | 1 |
| EUKIEFFERIELLA A | 1 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 22 |
| PSECTROCLADIUS B | 2 |
| SYNORTHOCLADIUS | 1 |
| SIMULIUM SP. | 9 |
| LYMNAEA SP. | 41 |
| OLIGOCHAETA | 1 |
| OLIGOCHAETA LUMB | 4 |

| 24/C-57 | |
|---|---|
| BAETIS INSIGNIFI | 9 |
| BAETIS TRICAUDAT | 3 |
| ATTENELLA MARGAR | 2 |
| TIMPANOGA HECUBA | 2 |
| HEPTAGENIA SOLIT | 1 |
| NIXE SIMPLICIOID | 1 |
| RHITHROGENA HAGE | 1 |
| STENONEMA SP. | 22 |
| PARALEPTOPHL BIC | 4 |
| TRICORYTHODES MI | 2 |
| ISOGENOIDES ELON | 1 |
| PROTOPTILA SP. | 2 |
| CHEUMATOPSYCHE | 57 |
| HYDROPSYCHE OCCI | 2 |
| SYMPHITOPS COCKE | 10 |
| CERACLEA SP. | 16 |
| OPTIOSERVUS SPP. | 1 |
| ZAITZEVIA PARVUL | 6 |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 11 |
| MICROTENDIPES SP | 37 |
| POLYPEDILUM SP.A | 11 |
| TANYTARSUS SP. C | 6 |
| XENOCHIRONOMUS | 2 |
| CRICOTOPUS SP. B | 1 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 13 |
| ORTHOCLADIUS OBU | 18 |
| PSECTROCLADIUS B | 1 |
| SYNORTHOCLADIUS | 2 |
| CHELIFERA SP. | 1 |
| SIMULIUM SP. | 8 |
| FERRISSIA SP. | 2 |
| LYMNAEA SP. | 146 |
| OLIGOCHAETA LUMB | 2 |

| 24/D-57 | |
|---|---|
| BAETIS INSIGNIFI | 2 |
| HEPTAGENIA SOLIT | 2 |
| RHITHROGENA HAGE | 1 |
| STENONEMA SP. | 4 |
| PARALEPTOPHL BIC | 1 |
| TRICORYTHODES MI | 6 |
| CLAASSENI SABULO | 1 |
| CHEUMATOPSYCHE | 54 |
| HYDROPSYCHE OCCI | 1 |
| SYMPHITOPS COCKE | 7 |
| CERACLEA SP. | 9 |
| PARARGYRACTIS SP | 1 |
| OREODYTES SCITIL | 1 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 11 |
| MICROPSECTR SP.A | 6 |
| MICROPSECTR SP.C | 7 |
| MICROTENDIPES SP | 46 |
| POLYPEDILUM SP.A | 4 |
| TANYTARSUS SP. C | 9 |
| CRICOTOPUS SP. B | 3 |
| EUKIEFFERIELLA B | 1 |
| EUKIEFFERIELLA E | 8 |
| ORTHOCLADIUS MAL | 1 |
| ORTHOCLADIUS NIG | 1 |
| ORTHOCLADIUS OBU | 64 |
| PSECTROCLADIUS B | 1 |
| SYNORTHOCLADIUS | 7 |
| ABLABESMYIA SP. | 2 |
| SIMULIUM SP. | 12 |
| FERRISSIA SP. | 1 |
| LYMNAEA SP. | 43 |
| OLIGOCHAETA LUMB | 3 |

| 25/A-58 | |
|---|---|
| ATTENELLA MARGAR | 2 |
| TIMPANOGA HECUBA | 20 |
| EPEORUS ALBERTAE | 2 |
| HEPTAGENIA SOLIT | 24 |
| NIXE SIMPLICIOID | 2 |
| STENONEMA SP. | 76 |
| TRICORYTHODES MI | 2 |
| CHEUMATOPSYCHE | 218 |
| SYMPHITOPS COCKE | 16 |
| CERACLEA SP. | 10 |
| PSYCHOMYIA FLAVI | 4 |
| OREODYTES SCITIL | 2 |
| OPTIOSERVUS SPP. | 2 |
| ZAITZEVIA PARVUL | 10 |
| DICROTENDIP SP.B | 12 |
| 2 | |
| MICROPSECTR SP.A | 4 |
| MICROPSECTR SP.C | 24 |
| MICROTENDIPES SP | 14 |
| POLYPEDILUM SP.A | 6 |
| STICTOCHIRONO SP | 8 |
| TANYTARSUS SP. C | 22 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS OBU | 22 |
| SYNORTHOCLADIUS | 2 |
| ABLABESMYIA SP. | 6 |
| FERRISSIA SP. | 2 |
| GYRAULUS SP. | 68 |
| LYMNAEA SP. | 98 |
| OLIGOCHAETA LUMB | 8 |

| 25/B-58 | |
|---|---|
| ATTENELLA MARGAR | 10 |
| TIMPANOGA HECUBA | 6 |
| HEPTAGENIA SOLIT | 26 |
| STENONEMA SP. | 58 |
| CLAASSENI SABULO | 2 |
| ISOGENOIDES ELON | 2 |
| PROTOPTILA SP. | 2 |
| CHEUMATOPSYCHE | 288 |
| HYDROPSYCHE OCCI | 4 |
| SYMPHITOPS COCKE | 14 |
| HYDROPTILA SP. | 2 |
| CERACLEA SP. | 8 |
| PARARGYRACTIS SP | 2 |
| ZAITZEVIA PARVUL | 4 |
| DICROTENDIP SP.C | 4 |
| MICROPSECTR SP.A | 8 |
| MICROPSECTR SP.C | 34 |
| MICROTENDIPES SP | 22 |
| TANYTARSUS SP. C | 30 |
| EUKIEFFERIELLA E | 4 |
| ORTHOCLADIUS OBU | 4 |
| ABLABESMYIA SP. | 2 |
| GYRAULUS SP. | 50 |
| LYMNAEA SP. | 94 |
| OLIGOCHAETA LUMB | 12 |

| 25/C-58 | |
|---|---|
| ATTENELLA MARGAR | 2 |
| TIMPANOGA HECUBA | 4 |
| HEPTAGENIA SOLIT | 10 |
| STENONEMA SP. | 30 |
| TRICORYTHODES MI | 4 |
| CHEUMATOPSYCHE | 162 |
| SYMPHITOPS COCKE | 12 |
| HYDROPTILA SP. | 4 |
| CERACLEA SP. | 4 |
| PSYCHOMYIA FLAVI | 4 |
| ZAITZEVIA PARVUL | 4 |
| DICROTENDIP SP.B | 2 |
| MICROPSECTR SP.C | 16 |
| MICROTENDIPES SP | 10 |
| POLYPEDILUM SP.A | 2 |
| STICTOCHIRONO SP | 2 |
| TANYTARSUS SP. C | 16 |
| EUKIEFFERIELLA E | 4 |
| ABLABESMYIA SP. | 2 |
| LEBERTIA SP. | 2 |
| GYRAULUS SP. | 76 |
| LYMNAEA SP. | 66 |
| PHYSA SP. | 2 |
| OLIGOCHAETA LUMB | 4 |

| 25/D-58 | |
|---|---|
| BAETIS INSIGNIFI | 2 |
| SERRATELLA TIBIA | 2 |
| TIMPANOGA HECUBA | 6 |
| HEPTAGENIA SOLIT | 4 |
| STENONEMA SP. | 40 |
| TRICORYTHODES MI | 4 |
| OPHIOGOMPHUS SP. | 2 |
| PROTOPTILA SP. | 4 |
| CHEUMATOPSYCHE | 146 |
| SYMPHITOPS COCKE | 4 |
| CERACLEA SP. | 12 |
| ZAITZEVIA PARVUL | 8 |
| MICROPSECTR SP.A | 2 |
| MICROPSECTR SP.C | 6 |
| MICROTENDIPES SP | 4 |
| POLYPEDILUM SP.A | 4 |
| TANYTARSUS SP. C | 8 |
| EUKIEFFERIELLA E | 2 |
| ORTHOCLADIUS OBU | 2 |
| ABLABESMYIA SP. | 2 |
| GYRAULUS SP. | 98 |
| LYMNAEA SP. | 166 |
| PHYSA SP. | 2 |
| OLIGOCHAETA LUMB | 6 |

Table 16. Continued

27/A-58

| | |
|---|---|
| CENTROPTILU SP.B | 1 |
| TIMPANOGA HECUBA | 3 |
| HEPTAGENIA SOLIT | 4 |
| NIXE SIMPLICIOID | 1 |
| ZAITZEVIA PARVUL | 2 |
| DICROTENDIP SP.B | 8 |
| MICROPSECTR SP.A | 1 |
| MICROPSECTR SP.C | 5 |
| PARACHIRON SP. B | 2 |
| PHAENOPSECTRA SP | 1 |
| TANYTARSUS SP. C | 1 |
| CLADOCERA | 5 |
| OLIGOCHAETA LUMB | 6 |

27/B-58

| | |
|---|---|
| CENTROPTILU SP.B | 2 |
| TIMPANOGA HECUBA | 2 |
| HEPTAGENIA SOLIT | 2 |
| CHEUMATOPSYCHE | 1 |
| SYMPHITOPS COCKE | 2 |
| ZAITZEVIA PARVUL | 1 |
| CRYPTOTENDIPE SP | 1 |
| DICROTENDIP SP.B | 29 |
| MICROPSECTR SP.A | 16 |
| MICROPSECTR SP.C | 15 |
| PARACHIRON SP. B | 1 |
| PHAENOPSECTRA SP | 2 |
| POLYPEDILUM SP.D | 1 |
| TANYTARSUS SP. C | 4 |
| ORTHOCLADIUS OBU | 13 |
| PSECTROCLADIUS B | 2 |
| CLADOCERA | 24 |
| OLIGOCHAETA LUMB | 5 |

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| | |
|---|---|
| CENTROPTILU SP.B | 2 |
| TIMPANOGA HECUBA | 3 |
| STENONEMA SP. | 1 |
| TRICORYTHODES MI | 1 |
| ZAITZEVIA PARVUL | 4 |
| DICROTENDIP SP.B | 9 |
| DICROTENDIP SP.C | 1 |
| MICROPSECTR SP.A | 1 |
| MICROPSECTR SP.C | 1 |
| MICROTENDIPES SP | 2 |
| POLYPEDILUM SP.A | 1 |
| POLYPEDILUM SP.D | 1 |
| TANYTARSUS SP. C | 2 |
| EUKIEFFERIELLA E | 1 |
| ORTHOCLADIUS OBU | 1 |
| SIMULIUM SP. | 1 |
| CLADOCERA | 60 |
| OLIGOCHAETA LUMB | 12 |

27/D-58

| | |
|---|---|
| ZAITZEVIA PARVUL | 23 |
| DICROTENDIP SP.B | 12 |
| MICROPSECTR SP.A | 2 |
| MICROPSECTR SP.C | 5 |
| MICROTENDIPES SP | 2 |
| PARACLADOPE SP.B | 1 |
| PHAENOPSECTRA SP | 1 |
| POLYPEDILUM SP.D | 1 |
| TANYTARSUS SP. C | 3 |
| ORTHOCLADIUS OBU | 1 |
| PSECTROCLADIUS B | 2 |
| CLADOCERA | 46 |
| LEBERTIA SP. | 1 |
| OLIGOCHAETA LUMB | 11 |

| 31/A-58 | |
|---|---|
| CENTROPTILU SP.A | 2 |
| NIXE SIMPLICIOID | 4 |
| PARALEPTOPHL BIC | 104 |
| PARALEPTOPHL DEB | 17 |
| TRICORYTHODES MI | 19 |
| CHEUMATOPSYCHE | 8 |
| HYDROPTILA SP. | 5 |
| CERACLEA SP. | 4 |
| DICROTENDIP SP.B | 3 |
| MICROPSECTR SP.A | 1 |
| MICROPSECTR SP.C | 1 |
| MICROTENDIPES SP | 47 |
| PARACLADOPE SP.B | 1 |
| PHAENOPSECTRA SP | 1 |
| TANYTARSUS SP. C | 1 |
| BRILLIA SP. | 1 |
| ORTHOCLADIUS OBU | 9 |
| SYNORTHOCLADIUS | 2 |
| SIMULIUM SP. | 1 |
| CLADOCERA | 1 |
| GAMMARUS SP. | 3 |
| LEBERTIA SP. | 1 |
| GYRAULUS SP. | 11 |
| LYMNAEA SP. | 8 |
| PHYSA SP. | 1 |
| OLIGOCHAETA LUMB | 4 |

| 31/B-58 | |
|---|---|
| CENTROPTILU SP.A | 1 |
| NIXE SIMPLICIOID | 3 |
| STENONEMA SP. | 3 |
| PARALEPTOPHL BIC | 89 |
| PARALEPTOPHL DEB | 5 |
| TRICORYTHODES MI | 11 |
| CHEUMATOPSYCHE | 10 |
| SYMPHITOPS COCKE | 1 |
| HYDROPTILA SP. | 3 |
| CERACLEA SP. | 3 |
| CRYPTOCHIRONOMUS | 1 |
| DICROTENDIP SP.B | 3 |
| MICROPSECTR SP.A | 1 |
| MICROPSECTR SP.C | 2 |
| MICROTENDIPES SP | 29 |
| PARATANYTAR SP.B | 2 |
| PHAENOPSECTRA SP | 1 |
| TANYTARSUS SP. C | 1 |
| ORTHOCLADIUS OBU | 10 |
| SYNORTHOCLADIUS | 9 |
| ABLABESMYIA SP. | 2 |
| SIMULIUM SP. | 4 |
| GAMMARUS SP. | 1 |
| LEBERTIA SP. | 1 |
| GYRAULUS SP. | 8 |
| LYMNAEA SP. | 12 |
| PHYSA SP. | 1 |

| 31/C-58 | |
|---|---|
| CENTROPTILU SP.A | 2 |
| NIXE SIMPLICIOID | 2 |
| STENONEMA SP. | 5 |
| PARALEPTOPHL BIC | 144 |
| PARALEPTOPHL DEB | 30 |
| TRICORYTHODES MI | 36 |
| CHEUMATOPSYCHE | 6 |
| SYMPHITOPS COCKE | 2 |
| HYDROPTILA SP. | 7 |
| CERACLEA SP. | 4 |
| CRYPTOCHIRONOMUS | 1 |
| MICROPSECTR SP.A | 1 |
| MICROTENDIPES SP | 53 |
| TANYTARSUS SP. C | 6 |
| POTTHASTIA SP. | 1 |
| ORTHOCLADIUS OBU | 22 |
| PSECTROCLADIUS B | 1 |
| SYNORTHOCLADIUS | 8 |
| ABLABESMYIA SP. | 1 |
| TIPULA SP. | 6 |
| CLADOCERA | 1 |
| GAMMARUS SP. | 6 |
| GYRAULUS SP. | 42 |
| LYMNAEA SP. | 24 |
| PHYSA SP. | 2 |
| OLIGOCHAETA LUMB | 2 |

| 31/D-58 | |
|---|---|
| CENTROPTILU SP.A | 1 |
| NIXE SIMPLICIOID | 8 |
| STENONEMA SP. | 1 |
| PARALEPTOPHL BIC | 117 |
| PARALEPTOPHL DEB | 18 |
| TRICORYTHODES MI | 19 |
| CHEUMATOPSYCHE | 8 |
| HYDROPTILA SP. | 2 |
| CERACLEA SP. | 5 |
| CRYPTOCHIRONOMUS | 3 |
| MICROTENDIPES SP | 36 |
| PARACHIRON SP. B | 1 |
| TANYTARSUS SP. C | 1 |
| ORTHOCLADIUS OBU | 10 |
| SYNORTHOCLADIUS | 7 |
| ABLABESMYIA SP. | 1 |
| SIMULIUM SP. | 1 |
| TIPULA SP. | 1 |
| CLADOCERA | 1 |
| GAMMARUS SP. | 5 |
| LEBERTIA SP. | 1 |
| GYRAULUS SP. | 19 |
| LYMNAEA SP. | 24 |
| PHYSA SP. | 3 |
| OLIGOCHAETA LUMB | 1 |

Table 16. Deep Water Monitoring Stations - Petite Ponar Grab Samples

| | |
|---|---|
| 3/1-57 | |
| CHIRONOMUS SP. | 6 |
| OLIGOCHAETA | 19 |
| 3/2-57 | |
| CHIRONOMUS SP. | 10 |
| OLIGOCHAETA | 16 |
| 3/3-57 | |
| CHIRONOMUS SP. | 3 |
| OLIGOCHAETA | 142 |
| 26/1-57 | |
| CHIRONOMUS SP. | 1 |
| CRYPTOCHIRONOMUS | 1 |
| CRYPTOTENDIPE SP | 5 |
| DICROTENDIP SP.A | 1 |
| PARALAUTERBORNIE | 13 |
| POLYPEDILUM SP.C | 31 |
| TANYTARSUS SP. A | 1 |
| PROCLADIUS SP. A | 2 |
| OLIGOCHAETA | 471 |
| 26/2-57 | |
| CRYPTOCHIRONOMUS | 4 |
| CRYPTOTENDIPE SP | 2 |
| DICROTENDIP SP.A | 1 |
| PARACLADOPE SP.B | 1 |
| PARALAUTERBORNIE | 11 |
| POLYPEDILUM SP.C | 19 |
| TANYTARSUS SP. A | 1 |
| OLIGOCHAETA | 418 |
| 26/3-57 | |
| CRYPTOCHIRONOMUS | 4 |
| CRYPTOTENDIPE SP | 6 |
| DICROTENDIP SP.A | 6 |
| PARALAUTERBORNIE | 6 |
| POLYPEDILUM SP.C | 51 |
| MONODIAMESA SP. | 2 |
| PROCLADIUS SP. A | 2 |
| OLIGOCHAETA | 353 |
| 28A/1-57 | |
| TANYTARSUS SP. A | 7 |
| PROCLADIUS SP. A | 10 |
| CLADOCERA | 1 |
| OSTRACODA | 1 |
| OLIGOCHAETA | 36 |
| 28A/2-57 | |
| PALPOMY-GP SP. A | 1 |
| PROCLADIUS SP. A | 6 |
| OLIGOCHAETA | 22 |
| 28A/3-57 | |
| TANYTARSUS SP. A | 3 |
| PROCLADIUS SP. A | 10 |
| CLADOCERA | 1 |
| OLIGOCHAETA | 51 |
| 28B/1-57 | |
| CHIRONOMUS SP. | 4 |
| PROCLADIUS SP. A | 3 |
| OLIGOCHAETA | 390 |
| 28B/2-57 | |
| CHIRONOMUS SP. | 11 |
| TANYTARSUS SP. A | 1 |
| PROCLADIUS SP. A | 5 |
| OLIGOCHAETA | 334 |
| 28B/3-57 | |
| CHIRONOMUS SP. | 6 |
| PROCLADIUS SP. A | 9 |
| OLIGOCHAETA | 746 |
| 30B/1-57 | |
| PALPOMY-GP SP. A | 2 |
| LENZIELLA SP. | 1 |
| PARALAUTERBORNIE | 9 |
| POLYPEDILUM SP.B | 1 |
| PROCLADIUS SP. A | 1 |
| CLADOCERA | 1 |
| COPEPODA | 4 |
| OLIGOCHAETA | 36 |
| 30B/2-57 | |
| PALPOMY-GP SP. A | 4 |
| LENZIELLA SP. | 2 |
| PARALAUTERBORNIE | 7 |
| POLYPEDILUM SP.B | 1 |
| CLADOCERA | 7 |
| COPEPODA | 4 |
| OSTRACODA | 1 |
| OLIGOCHAETA | 43 |
| 30B/3-57 | |
| OECETIS SP. B | 1 |
| PALPOMY-GP SP. A | 2 |
| CRYPTOCHIRONOMUS | 2 |
| DICROTENDIP SP.A | 1 |
| PARALAUTERBORNIE | 8 |
| TANYTARSUS SP. A | 1 |
| PROCLADIUS SP. A | 2 |
| CLADOCERA | 8 |
| COPEPODA | 4 |
| OLIGOCHAETA | 67 |

Table 17. Benthic Macroinvertebrate Sample Percent Distribution and Diversity Data, Spring 1984

Shallow Water Monitoring Stations - Kick Samples

SAMPLE: 01TUR3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 19.4 |
| 2 | DRUNELLA GRANDIS | .1 |
| 3 | EPHEMERELLA INFR | 32.4 |
| 4 | CINYGMULA SP. A | .2 |
| 5 | RHITHROGENA HAGE | 6.6 |
| 6 | PARALEPTOPHL MEM | .2 |
| 7 | AMELETUS SPARSAT | .1 |
| 8 | AMELETUS VELOX | .1 |
| 9 | CAPNIA-GROUP SP. | 2.2 |
| 10 | ALLOPERLA-GROUP | 3.2 |
| 11 | PROSTOIA BESAMET | 4.7 |
| 12 | ZAPADA CINCTIPES | .1 |
| 13 | CLAASSENI SABULO | .8 |
| 14 | CULTUS PILATUS | .4 |
| 15 | ISOGENOIDES ELON | .5 |
| 16 | ISOPERLA FULVA | 11.6 |
| 17 | ISOPERLA QUINQUE | 3.1 |
| 18 | PTERONARCELLA BA | 3 |
| 19 | PTERONARCYS CALI | .1 |
| 20 | TAENIONEMA PACIF | 1.9 |
| 21 | BRACHYCENTRUS AM | .1 |
| 22 | ARCTOPSYCHE GRAN | .3 |
| 23 | CHEUMATOPSYCHE | .2 |
| 24 | HYDROPSYCHE OCCI | 2.9 |
| 25 | SYMPHITOPSYCHE C | .5 |
| 26 | SYMPHITOPSYCHE S | 1.6 |
| 27 | LEPIDOSTOMA SP.A | .1 |
| 28 | OPTIOSERVUS SPP. | .4 |
| 29 | ZAITZEVIA PARVUL | .1 |
| 30 | ATHERIX VARIEGAT | .3 |
| 31 | MICROTENDIPES A | .1 |
| 32 | ORTHOCLADIUS (EU | .1 |
| 33 | ORTHOCLADIUS A | .2 |
| 34 | SIMULIUM SP. A | 2.5 |
| 35 | HEXATOMA SP. | .1 |
| 36 | TIPULA SP. | .1 |

DIVERSITY INDEX 3.3

Table 17. Continued

SAMPLE: 02BLW3
SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 18.4 |
| 2 | DRUNELLA DODDSI | .1 |
| 3 | DRUNELLA GRANDIS | .4 |
| 4 | EPHEMERELLA INFR | 5.8 |
| 5 | RHITHROGENA HAGE | 7.5 |
| 6 | AMELETUS VELOX | .2 |
| 7 | ALLOPERLA-GROUP | 4 |
| 8 | PROSTOIA BESAMET | .5 |
| 9 | CALINEURIA CALIF | 1.6 |
| 10 | CLAASSENI SABULO | 8 |
| 11 | HESPEROPERLA PAC | 1.1 |
| 12 | CULTUS PILATUS | .5 |
| 13 | ISOGENOIDES ELON | .1 |
| 14 | ISOPERLA FULVA | 12.2 |
| 15 | PTERONARCYS CALI | 2.7 |
| 16 | TAENIONEMA PACIF | 1.1 |
| 17 | BRACHYCENTRUS OC | .1 |
| 18 | GLOSSOSOMA SP. | 1 |
| 19 | ARCTOPSYCHE GRAN | 1 |
| 20 | CHEUMATOPSYCHE | 9.6 |
| 21 | HYDROPSYCHE OCCI | .7 |
| 22 | SYMPHITOPSYCHE C | 6.3 |
| 23 | SYMPHITOPSYCHE S | [illegible].1 |
| 24 | PSYCHOMYIA FLAVI | .2 |
| 25 | RHYACOPHILA BIFI | .2 |
| 26 | PARARGYRACTIS SP | .1 |
| 27 | OPTIOSERVUS SPP. | 1.3 |
| 28 | ZAITZEVIA PARVUL | 2.9 |
| 29 | ATHERIX VARIEGAT | .4 |
| 30 | MICROTENDIPES A | .1 |
| 31 | DIAMESA SP. A | .1 |
| 32 | CRICOTOPUS SP. A | .1 |
| 33 | EUKIEFFERIELLA A | .5 |
| 34 | ORTHOCLADIUS (EU | .1 |
| 35 | ORTHOCLADIUS MAL | .2 |
| 36 | SIMULIUM SP. A | 10 |
| 37 | HEXATOMA SP. | .4 |

DIVERSITY INDEX 3.9

Table 17. Continued

SAMPLE: 04CFM3
SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 30.9 |
| 2 | DRUNELLA GRANDIS | 1 |
| 3 | EPHEMERELLA INFR | 11.6 |
| 4 | RHITHROGENA HAGE | 1 |
| 5 | AMELETUS VELOX | .3 |
| 6 | CAPNIA-GROUP SP. | 8 |
| 7 | ALLOPERLA-GROUP | 1.2 |
| 8 | PROSTOIA BESAMET | .7 |
| 9 | CALINEURIA CALIF | .1 |
| 10 | CLAASSENI SABULO | .1 |
| 11 | HESPEROPERLA PAC | .5 |
| 12 | CULTUS PILATUS | .2 |
| 13 | ISOGENOIDES ELON | 1.6 |
| 14 | ISOPERLA FULVA | 12.4 |
| 15 | ISOPERLA QUINQUE | 1.2 |
| 16 | SKWALA PARALLELA | .4 |
| 17 | PTERONARCELLA BA | 1.7 |
| 18 | PTERONARCYS CALI | .3 |
| 19 | TAENIONEMA PACIF | 8.5 |
| 20 | BRACHYCENTRUS OC | .2 |
| 21 | ARCTOPSYCHE GRAN | .3 |
| 22 | CHEUMATOPSYCHE | 4.4 |
| 23 | HYDROPSYCHE OCCI | 3.8 |
| 24 | SYMPHITOPSYCHE C | 4.4 |
| 25 | SYMPHITOPSYCHE S | .6 |
| 26 | LEPIDOSTOMA SP.A | .1 |
| 27 | OECETIS SP. A | .1 |
| 28 | PSYCHOMYIA FLAVI | .4 |
| 29 | RHYACOPHILA BIFI | .2 |
| 30 | OREODYTES SCITIL | .1 |
| 31 | OPTIOSERVUS SPP. | .7 |
| 32 | ZAITZEVIA PARVUL | .6 |
| 33 | ATHERIX VARIEGAT | .3 |
| 34 | MICROTENDIPES A | .6 |
| 35 | DIAMESA SP. A | .2 |
| 36 | BRILLIA SP. | .2 |
| 37 | ORTHOCLADIUS (EU | .2 |
| 38 | ORTHOCLADIUS OBU | .2 |
| 39 | TRISSOCLADIUS A | .1 |
| 40 | SIMULIUM SP. A | .2 |
| 41 | HEXATOMA SP. | .4 |

DIVERSITY INDEX 3.57

Table 17. Continued

SAMPLE: 05MIS3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 44 |
| 2 | DRUNELLA GRANDIS | .1 |
| 3 | EPHEMERELLA INFR | 6.5 |
| 4 | RHITHROGENA HAGE | 10 |
| 5 | AMELETUS SPARSAT | .2 |
| 6 | AMELETUS VELOX | .2 |
| 7 | CAPNIA-GROUP SP. | 1.9 |
| 8 | ALLOPERLA-GROUP | 2.4 |
| 9 | PROSTOIA BESAMET | .2 |
| 10 | CALINEURIA CALIF | .1 |
| 11 | CLAASSENI SABULO | .1 |
| 12 | HESPEROPERLA PAC | .2 |
| 13 | CULTUS PILATUS | .5 |
| 14 | ISOGENOIDES ELON | 2.2 |
| 15 | ISOPERLA FULVA | 19.5 |
| 16 | ISOPERLA QUINQUE | 1.4 |
| 17 | SKWALA PARALLELA | .6 |
| 18 | PTERONARCELLA BA | .7 |
| 19 | PTERONARCYS CALI | .3 |
| 20 | TAENIONEMA PACIF | 3.5 |
| 21 | ARCTOPSYCHE GRAN | .1 |
| 22 | CHEUMATOPSYCHE | .7 |
| 23 | HYDROPSYCHE OCCI | 1.7 |
| 24 | SYMPHITOPSYCHE C | 1.7 |
| 25 | SYMPHITOPSYCHE S | .7 |
| 26 | PSYCHOMYIA FLAVI | .1 |
| 27 | RHYACOPHILA BIFI | .1 |
| 28 | ZAITZEVIA PARVUL | .1 |
| 29 | ATHERIX VARIEGAT | .1 |
| 30 | ORTHOCLADIUS (EU | .1 |
| 31 | SIMULIUM SP. A | .1 |

DIVERSITY INDEX 2.8

Table 17. Continued

SAMPLE: 06MIW3
SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 23.2 |
| 2 | DRUNELLA GRANDIS | .1 |
| 3 | EPHEMERELLA INFR | 16.7 |
| 4 | CINYGMULA SP. A | .3 |
| 5 | RHITHROGENA HAGE | 2 |
| 6 | AMELETUS VELOX | .3 |
| 7 | CAPNIA-GROUP SP. | 2.7 |
| 8 | ALLOPERLA-GROUP | .5 |
| 9 | PROSTOIA BESAMET | .3 |
| 10 | CALINEURIA CALIF | .1 |
| 11 | CLAASSENI SABULO | .1 |
| 12 | HESPEROPERLA PAC | .3 |
| 13 | CULTUS PILATUS | 1.5 |
| 14 | ISOGENOIDES ELON | 1.3 |
| 15 | ISOPERLA FULVA | 7.7 |
| 16 | ISOPERLA QUINQUE | 4 |
| 17 | SKWALA PARALLELA | .7 |
| 18 | PTERONARCELLA BA | 1.1 |
| 19 | PTERONARCYS CALI | 1.1 |
| 20 | TAENIONEMA PACIF | 1.6 |
| 21 | ARCTOPSYCHE GRAN | 1.2 |
| 22 | CHEUMATOPSYCHE | 10.5 |
| 23 | HYDROPSYCHE OCCI | 4.9 |
| 24 | SYMPHITOPSYCHE C | 9.3 |
| 25 | SYMPHITOPSYCHE S | .4 |
| 26 | PSYCHOMYIA FLAVI | 1.1 |
| 27 | RHYACOPHILA BIFI | .1 |
| 28 | ZAITZEVIA PARVUL | 1.9 |
| 29 | DIAMESA SP. A | .4 |
| 30 | DIAMESA SP. B | .5 |
| 31 | CRICOTOPUS SP. A | .1 |
| 32 | CRICOTOPUS SP. B | .4 |
| 33 | ORTHOCLADIUS (EU | 1.6 |
| 34 | ORTHOCLADIUS A | .3 |
| 35 | ORTHOCLADIUS B | .1 |
| 36 | ORTHOCLADIUS C | .1 |
| 37 | ORTHOCLADIUS MAL | .1 |
| 38 | ORTHOCLADIUS OBU | .8 |
| 39 | HEXATOMA SP. | .4 |

DIVERSITY INDEX 3.81

Table 17. Continued

SAMPLE: 08BMW3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 9.1 |
| 2 | DRUNELLA GRANDIS | .3 |
| 3 | EPHEMERELLA INFR | 35.6 |
| 4 | RHITHROGENA HAGE | .8 |
| 5 | AMELETUS VELOX | .2 |
| 6 | CAPNIA-GROUP SP. | 1.1 |
| 7 | ALLOPERLA-GROUP | .1 |
| 8 | PROSTOIA BESAMET | .2 |
| 9 | ZAPADA COLUMBIAN | .1 |
| 10 | CALINEURIA CALIF | .2 |
| 11 | CLAASSENI SABULO | .6 |
| 12 | HESPEROPERLA PAC | .3 |
| 13 | CULTUS PILATUS | 5.2 |
| 14 | ISOGENOIDES ELON | 3.1 |
| 15 | ISOPERLA FULVA | 10 |
| 16 | ISOPERLA QUINQUE | 7.1 |
| 17 | PTERONARCELLA BA | 1.5 |
| 18 | PTERONARCYS CALI | .2 |
| 19 | TAENIONEMA PACIF | 1.4 |
| 20 | ARCTOPSYCHE GRAN | .6 |
| 21 | CHEUMATOPSYCHE | 6.[illegible] |
| 22 | HYDROPSYCHE OCCI | 4.8 |
| 23 | SYMPHITOPSYCHE C | 3.[illegible] |
| 24 | SYMPHITOPSYCHE S | .5 |
| 25 | HYDROPTILA SP. | .2 |
| 26 | PSYCHOMYIA FLAVI | .3 |
| 27 | PARARGYRACTIS SP | .6 |
| 28 | OPTIOSERVUS SPP. | .2 |
| 29 | ZAITZEVIA PARVUL | .8 |
| 30 | MICROTENDIPES A | .2 |
| 31 | PHAENOPSECTRA SP | .1 |
| 32 | DIAMESA SP. A | .1 |
| 33 | DIAMESA SP. B | 1.2 |
| 34 | PAGASTIA SP. | .1 |
| 35 | CRICOTOPUS SP. B | .4 |
| 36 | EUKIEFFERIELLA A | .2 |
| 37 | ORTHOCLADIUS (EU | .3 |
| 38 | ORTHOCLADIUS B | .5 |
| 39 | ORTHOCLADIUS OBU | .9 |
| 40 | ABLABESMYIA SP. | .1 |
| 41 | WIEDEMANNIA SP. | .1 |
| 42 | SIMULIUM SP. A | .1 |
| 43 | HEXATOMA SP. | .2 |
| 44 | OLIGOCHAETA | .3 |

DIVERSITY INDEX 3.55

Table 17. Continued

SAMPLE: 09SHE3
SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 9 |
| 2 | EPHEMERELLA INFR | 38.1 |
| 3 | RHITHROGENA HAGE | .8 |
| 4 | PARALEPTOPHL MEM | .1 |
| 5 | AMELETUS VELOX | .9 |
| 6 | CAPNIA-GROUP SP. | 5 |
| 7 | ALLOPERLA-GROUP | .1 |
| 8 | PROSTOIA BESAMET | .1 |
| 9 | CLAASSENI SABULO | .4 |
| 10 | CULTUS PILATUS | .5 |
| 11 | ISOGENOIDES ELON | 5 |
| 12 | ISOPERLA FULVA | 8.4 |
| 13 | ISOPERLA QUINQUE | 4.8 |
| 14 | SKWALA PARALLELA | 1.1 |
| 15 | PTERONARCELLA BA | .4 |
| 16 | TAENIONEMA PACIF | 1.1 |
| 17 | ARCTOPSYCHE GRAN | .1 |
| 18 | CHEUMATOPSYCHE | 7.7 |
| 19 | HYDROPSYCHE OCCI | 4 |
| 20 | SYMPHITOPSYCHE C | 2.3 |
| 21 | SYMPHITOPSYCHE S | .7 |
| 22 | OECETIS SP. A | .1 |
| 23 | PSYCHOMYIA FLAVI | .7 |
| 24 | PARARGYRACTIS SP | .6 |
| 25 | OPTIOSERVUS SPP. | .2 |
| 26 | ZAITZEVIA PARVUL | .5 |
| 27 | ATHERIX VARIEGAT | .2 |
| 28 | MICROTENDIPES A | .2 |
| 29 | PARACLADOPELMA | .1 |
| 30 | DIAMESA SP. A | .1 |
| 31 | DIAMESA SP. B | .9 |
| 32 | CRICOTOPUS SP. B | .1 |
| 33 | CRICOTOPUS SP. C | .1 |
| 34 | EUKIEFFERIELLA A | .1 |
| 35 | EUKIEFFERIELLA B | .2 |
| 36 | EUKIEFFERIELLA C | .1 |
| 37 | ORTHOCLADIUS (EU | 1.5 |
| 38 | ORTHOCLADIUS B | .2 |
| 39 | ORTHOCLADIUS OBU | 2.9 |
| 40 | WIEDEMANNIA SP. | .1 |
| 41 | HEXATOMA SP. | .2 |

DIVERSITY INDEX 3.48

Table 17. Continued

SAMPLE: 10BRM3
SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 6.2 |
| 2 | DRUNELLA GRANDIS | 1 |
| 3 | EPHEMERELLA INFR | 20.1 |
| 4 | RHITHROGENA HAGE | 4.6 |
| 5 | PARALEPTOPHL MEM | .2 |
| 6 | CAPNIA-GROUP SP. | 3.2 |
| 7 | ALLOPERLA-GROUP | .1 |
| 8 | CLAASSENI SABULO | 1.1 |
| 9 | CULTUS PILATUS | .4 |
| 10 | ISOGENOIDES ELON | .3 |
| 11 | ISOPERLA FULVA | 2.2 |
| 12 | ISOPERLA QUINQUE | 1.3 |
| 13 | SKWALA PARALLELA | .1 |
| 14 | PTERONARCELLA BA | 1.5 |
| 15 | TAENIONEMA PACIF | 3.4 |
| 16 | GLOSSOSOMA SP. | .1 |
| 17 | ARCTOPSYCHE GRAN | .3 |
| 18 | CHEUMATOPSYCHE | 13.1 |
| 19 | HYDROPSYCHE OCCI | 19 |
| 20 | SYMPHITOPSYCHE C | 2 |
| 21 | SYMPHITOPSYCHE S | .4 |
| 22 | HYDROPTILA SP. | .5 |
| 23 | LEPIDOSTOMA SP.A | 3 |
| 24 | PARARGYRACTIS SP | .1 |
| 25 | OREODYTES SCITIL | .1 |
| 26 | OPTIOSERVUS SPP. | 6.6 |
| 27 | ZAITZEVIA PARVUL | 2 |
| 28 | ATHERIX VARIEGAT | .4 |
| 29 | MICROPSECTRA SP. | .3 |
| 30 | DIAMESA SP. B | .2 |
| 31 | PAGASTIA SP. | .3 |
| 32 | CRICOTOPUS SP. A | .8 |
| 33 | CRICOTOPUS SP. B | .9 |
| 34 | EUKIEFFERIELLA C | .3 |
| 35 | ORTHOCLADIUS (EU | .5 |
| 36 | ORTHOCLADIUS OBU | .3 |
| 37 | SIMULIUM SP. A | 4.3 |
| 38 | HEXATOMA SP. | .2 |
| 39 | TIPULA SP. | .3 |
| 40 | OLIGOCHAETA LUMB | 1 |
| 41 | TURBELLARIA | .2 |

DIVERSITY INDEX 3.86

Table 17. Continued

SAMPLE: 11HAR3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 12.5 |
| 2 | EPHEMERELLA INFR | 28.1 |
| 3 | RHITHROGENA HAGE | 6 |
| 4 | AMELETUS VELOX | .1 |
| 5 | CAPNIA-GROUP SP. | 0 |
| 6 | CLAASSENI SABULO | .4 |
| 7 | CULTUS PILATUS | 2.8 |
| 8 | ISOGENOIDES ELON | 2.3 |
| 9 | ISOPERLA FULVA | 8.4 |
| 10 | ISOPERLA QUINQUE | 4.2 |
| 11 | SKWALA PARALLELA | 0 |
| 12 | PTERONARCELLA BA | 1.2 |
| 13 | PTERONARCYS CALI | .2 |
| 14 | TAENIONEMA PACIF | 2.3 |
| 15 | ARCTOPSYCHE GRAN | .3 |
| 16 | CHEUMATOPSYCHE | 2.9 |
| 17 | HYDROPSYCHE OCCI | 5.6 |
| 18 | SYMPHITOPSYCHE C | .1 |
| 19 | SYMPHITOPSYCHE S | 0 |
| 20 | HYDROPTILA SP. | 3.3 |
| 21 | LEPIDOSTOMA SP.A | .1 |
| 22 | OECETIS SP. A | .1 |
| 23 | PARARGYRACTIS SP | 0 |
| 24 | OPTIOSERVUS SPP. | .1 |
| 25 | ZAITZEVIA PARVUL | .2 |
| 26 | ATHERIX VARIEGAT | .3 |
| 27 | MICROPSECTRA SP. | 0 |
| 28 | MICROTENDIPES A | 0 |
| 29 | DIAMESA SP. A | 0 |
| 30 | DIAMESA SP. B | .6 |
| 31 | PAGASTIA SP. | .1 |
| 32 | CRICOTOPUS SP. A | .5 |
| 33 | CRICOTOPUS SP. B | .6 |
| 34 | EUKIEFFERIELLA B | 0 |
| 35 | EUKIEFFERIELLA C | .1 |
| 36 | ORTHOCLADIUS (EU | 3 |
| 37 | ORTHOCLADIUS A | 0 |
| 38 | ORTHOCLADIUS B | .1 |
| 39 | ORTHOCLADIUS MAL | 0 |
| 40 | ORTHOCLADIUS OBU | 2.3 |
| 41 | TRISSOCLADIUS A | 0 |
| 42 | CHELIFERA SP. | 0 |
| 43 | PROSIMULIUM SP. | 0 |
| 44 | SIMULIUM SP. A | 9.3 |
| 45 | HEXATOMA SP. | 1 |

DIVERSITY INDEX 3.71

Table 17. Continued

SAMPLE: 13BCH3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 8.1 |
| 2 | EPHEMERELLA INFR | 21.7 |
| 3 | RHITHROGENA HAGE | 16 |
| 4 | PARALEPTOPHL MEM | .2 |
| 5 | AMELETUS VELOX | .2 |
| 6 | CAPNIA-GROUP SP. | 1.4 |
| 7 | ALLOPERLA-GROUP | .5 |
| 8 | CALINEURIA CALIF | .1 |
| 9 | CLAASSENI SABULO | 2.3 |
| 10 | HESPEROPERLA PAC | .1 |
| 11 | CULTUS PILATUS | 1.9 |
| 12 | ISOGENOIDES ELON | 2.8 |
| 13 | ISOPERLA FULVA | 11.8 |
| 14 | ISOPERLA QUINQUE | 2.7 |
| 15 | SKWALA PARALLELA | .5 |
| 16 | PTERONARCELLA BA | 2.3 |
| 17 | PTERONARCYS CALI | .1 |
| 18 | TAENIONEMA PACIF | 3.8 |
| 19 | BRACHYCENTRUS OC | .1 |
| 20 | ARCTOPSYCHE GRAN | .5 |
| 21 | CHEUMATOPSYCHE | 2.8 |
| 22 | HYDROPSYCHE OCCI | 4.3 |
| 23 | SYMPHITOPSYCHE C | .4 |
| 24 | HYDROPTILA SP. | 1.2 |
| 25 | LEPIDOSTOMA SP.A | .1 |
| 26 | OECETIS SP. A | .5 |
| 27 | PSYCHOMYIA FLAVI | .2 |
| 28 | OREODYTES SCITIL | .2 |
| 29 | OPTIOSERVUS SPP. | .6 |
| 30 | ZAITZEVIA PARVUL | .7 |
| 31 | ATHERIX VARIEGAT | .9 |
| 32 | CHIRONOMUS SP. | .1 |
| 33 | MICROTENDIPES A | .8 |
| 34 | DIAMESA SP. B | .2 |
| 35 | PAGASTIA SP. | .3 |
| 36 | POTTHASTIA SP. | .1 |
| 37 | CRICOTOPUS SP. A | .2 |
| 38 | ORTHOCLADIUS (EU | .4 |
| 39 | ORTHOCLADIUS D | .1 |
| 40 | ORTHOCLADIUS OBU | .6 |
| 41 | TRISSOCLADIUS A | .1 |
| 42 | SIMULIUM SP. A | 5.2 |
| 43 | HEXATOMA SP. | 3.1 |
| 44 | TIPULA SP. | .2 |

DIVERSITY INDEX 3.95

Table 17. Continued

SAMPLE: 15HUS3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 9.5 |
| 2 | DRUNELLA GRANDIS | .1 |
| 3 | EPHEMERELLA INFR | 38.1 |
| 4 | RHITHROGENA HAGE | 18.3 |
| 5 | PARALEPTOPHL MEM | .1 |
| 6 | AMELETUS SPARSAT | .9 |
| 7 | CAPNIA-GROUP SP. | .9 |
| 8 | CALINEURIA CALIF | .1 |
| 9 | CLAASSENI SABULO | .4 |
| 10 | HESPEROPERLA PAC | .4 |
| 11 | CULTUS PILATUS | .9 |
| 12 | ISOGENOIDES ELON | 2.8 |
| 13 | ISOPERLA FULVA | 6.9 |
| 14 | ISOPERLA QUINQUE | 2.3 |
| 15 | SKWALA PARALLELA | .7 |
| 16 | PTERONARCELLA BA | 1.4 |
| 17 | PTERONARCYS CALI | .3 |
| 18 | TAENIONEMA PACIF | 1.4 |
| 19 | BRACHYCENTRUS OC | .1 |
| 20 | ARCTOPSYCHE GRAN | .1 |
| 21 | CHEUMATOPSYCHE | .7 |
| 22 | HYDROPSYCHE OCCI | 1.4 |
| 23 | SYMPHITOPSYCHE C | .2 |
| 24 | HYDROPTILA SP. | 3.6 |
| 25 | OECETIS SP. A | .1 |
| 26 | PSYCHOMYIA FLAVI | .1 |
| 27 | PARARGYRACTIS SP | .1 |
| 28 | OREODYTES SCITIL | .1 |
| 29 | OPTIOSERVUS SPP. | .4 |
| 30 | ZAITZEVIA PARVUL | .4 |
| 31 | ATHERIX VARIEGAT | .3 |
| 32 | MICROTENDIPES A | 3 |
| 33 | DIAMESA SP. A | .1 |
| 34 | DIAMESA SP. B | .1 |
| 35 | EUKIEFFERIELLA C | .1 |
| 36 | ORTHOCLADIUS (EU | .8 |
| 37 | ORTHOCLADIUS B | .1 |
| 38 | ORTHOCLADIUS D | .1 |
| 39 | ORTHOCLADIUS OBU | .3 |
| 40 | TRISSOCLADIUS A | .1 |
| 41 | ABLABESMYIA SP. | .1 |
| 42 | DIPTERA-DOLICHOP | .1 |
| 43 | SIMULIUM SP. A | .9 |
| 44 | HEXATOMA SP. | 1.4 |
| 45 | TIPULA SP. | .1 |

DIVERSITY INDEX 3.28

Table 17. Continued

SAMPLE: 19LOZ3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 14.3 |
| 2 | DRUNELLA GRANDIS | .4 |
| 3 | EPHEMERELLA INFR | 51.3 |
| 4 | HEPTAGENIA SOLIT | .3 |
| 5 | RHITHROGENA HAGE | 2 |
| 6 | PARALEPTOPHL MEM | 3.2 |
| 7 | CAPNIA-GROUP SP. | .5 |
| 8 | PROSTOIA BESAMET | .3 |
| 9 | CLAASSENI SABULO | .1 |
| 10 | HESPEROPERLA PAC | .1 |
| 11 | CULTUS PILATUS | 4.2 |
| 12 | ISOGENOIDES ELON | 2 |
| 13 | ISOPERLA FULVA | [illegible].8 |
| 14 | ISOPERLA QUINQUE | 2.9 |
| 15 | SKWALA PARALLELA | .1 |
| 16 | PTERONARCYS CALI | .1 |
| 17 | TAENIONEMA PACIF | 1.2 |
| 18 | BRACHYCENTRUS OC | .1 |
| 19 | CHEUMATOPSYCHE | 2.2 |
| 20 | HYDROPSYCHE OCCI | 2.1 |
| 21 | SYMPHITOPSYCHE C | .5 |
| 22 | HYDROPTILA SP. | .3 |
| 23 | PSYCHOMYIA FLAVI | .1 |
| 24 | OPTIOSERVUS SPP. | .1 |
| 25 | MICROPSECTRA SP. | .1 |
| 26 | MICROTENDIPES A | .1 |
| 27 | DIAMESA SP. A | .3 |
| 28 | DIAMESA SP. B | .1 |
| 29 | PAGASTIA SP. | 1.8 |
| 30 | CRICOTOPUS SP. A | .2 |
| 31 | CRICOTOPUS SP. B | .1 |
| 32 | EUKIEFFERIELLA A | .1 |
| 33 | ORTHOCLADIUS (EU | 3.2 |
| 34 | ORTHOCLADIUS B | .6 |
| 35 | ORTHOCLADIUS D | .2 |
| 36 | ORTHOCLADIUS MAL | .2 |
| 37 | ORTHOCLADIUS OBU | .8 |
| 38 | TRISSOCLADIUS A | .1 |

DIVERSITY INDEX 2.86

Table 17. Continued

SAMPLE: 21STR3
SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 19.6 |
| 2 | DRUNELLA GRANDIS | .1 |
| 3 | EPHEMERELLA INFR | 48.3 |
| 4 | HEPTAGENIA SOLIT | .1 |
| 5 | RHITHROGENA HAGE | 10.2 |
| 6 | PARALEPTOPHL MEM | 3.7 |
| 7 | AMELETUS VELOX | .2 |
| 8 | CAPNIA-GROUP SP. | .1 |
| 9 | PROSTOIA BESAMET | .2 |
| 10 | CULTUS PILATUS | .4 |
| 11 | ISOGENOIDES ELON | .6 |
| 12 | ISOPERLA FULVA | 1.2 |
| 13 | ISOPERLA QUINQUE | 2 |
| 14 | TAENIONEMA PACIF | 2 |
| 15 | CHEUMATOPSYCHE | .3 |
| 16 | HYDROPSYCHE OCCI | .3 |
| 17 | SYMPHITOPSYCHE C | .1 |
| 18 | SYMPHITOPSYCHE S | 0 |
| 19 | HYDROPTILA SP. | .1 |
| 20 | LEPIDOSTOMA SP.A | 0 |
| 21 | PSYCHOMYIA FLAVI | 0 |
| 22 | OPTIOSERVUS SPP. | .1 |
| 23 | ZAITZEVIA PARVUL | .1 |
| 24 | MICROPSECTRA SP. | 0 |
| 25 | MICROTENDIPES A | .2 |
| 26 | DIAMESA SP. A | .1 |
| 27 | DIAMESA SP. B | .8 |
| 28 | PAGASTIA SP. | .6 |
| 29 | CRICOTOPUS SP. B | .2 |
| 30 | ORTHOCLADIUS (EU | 4.8 |
| 31 | ORTHOCLADIUS B | .5 |
| 32 | ORTHOCLADIUS D | .2 |
| 33 | ORTHOCLADIUS MAL | .2 |
| 34 | ORTHOCLADIUS OBU | 1.8 |
| 35 | TRISSOCLADIUS A | .8 |
| 36 | SIMULIUM SP. A | .1 |

DIVERSITY INDEX 2.62

Table 17. Continued

SAMPLE: 24APL3
SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 2.7 |
| 2 | EPHEMERELLA INFR | .9 |
| 3 | HEPTAGENIA SOLIT | .7 |
| 4 | RHITHROGENA HAGE | .7 |
| 5 | STENONEMA SP. | .1 |
| 6 | PARALEPTOPHL MEM | 8.7 |
| 7 | ISOGENOIDES ELON | .2 |
| 8 | TAENIONEMA PACIF | 1.2 |
| 9 | CHEUMATOPSYCHE | .1 |
| 10 | ZAITZEVIA PARVUL | .[illegible] |
| 11 | DICROTENDIPES SP | .1 |
| 12 | MICROPSECTRA SP. | .2 |
| 13 | DIAMESA SP. A | .1 |
| 14 | DIAMESA SP. B | 6.2 |
| 15 | PAGASTIA SP. | .8 |
| 16 | CRICOTOPUS SP. B | 6.8 |
| 17 | EUKIEFFERIELLA D | .2 |
| 18 | ORTHOCLADIUS (EU | 25.8 |
| 19 | ORTHOCLADIUS B | .9 |
| 20 | ORTHOCLADIUS D | .6 |
| 21 | ORTHOCLADIUS MAL | .5 |
| 22 | ORTHOCLADIUS OBU | 31.6 |
| 23 | TRISSOCLADIUS A | 9.5 |
| 24 | SIMULIUM SP. A | 1.1 |

DIVERSITY INDEX 2.94

SAMPLE: 27TFR3
SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | .2 |
| 2 | DRUNELLA GRANDIS | .2 |
| 3 | EPHEMERELLA INFR | .3 |
| 4 | CINYGMULA SP. A | .2 |
| 5 | HEPTAGENIA SOLIT | 1.8 |
| 6 | STENONEMA SP. | 22.1 |
| 7 | PTERONARCYS CALI | .2 |
| 8 | TAENIONEMA PACIF | .5 |
| 9 | OPHIOGOMPHUS SP. | .3 |
| 10 | GLOSSOSOMA SP. | .2 |
| 11 | CHEUMATOPSYCHE | 12.8 |
| 12 | HYDROPSYCHE SP.A | 2.3 |
| 13 | HYDROPSYCHE OCCI | 1.7 |
| 14 | SYMPHITOPSYCHE C | 7.4 |
| 15 | HYDROPTILA SP. | 4.2 |
| 16 | ZUMATRICHIA NOTO | .2 |
| 17 | CERACLEA SP. | 5.7 |
| 18 | OECETIS SP. A | .2 |
| 19 | PSYCHOMYIA FLAVI | 3.4 |
| 20 | PARARGYRACTIS SP | 1.2 |
| 21 | OPTIOSERVUS SPP. | .3 |
| 22 | ZAITZEVIA PARVUL | 2.2 |
| 23 | MICROPSECTRA SP. | .2 |
| 24 | MICROTENDIPES A | 2.9 |
| 25 | DIAMESA SP. B | .8 |
| 26 | PAGASTIA SP. | 11.4 |
| 27 | CRICOTOPUS SP. A | .8 |
| 28 | CRICOTOPUS SP. B | .2 |
| 29 | EUKIEFFERIELLA A | .2 |
| 30 | EUKIEFFERIELLA C | 1 |
| 31 | ORTHOCLADIUS (EU | 1.5 |
| 32 | ORTHOCLADIUS B | 1.7 |
| 33 | ORTHOCLADIUS MAL | .5 |
| 34 | ORTHOCLADIUS OBU | 9.4 |
| 35 | TRISSOCLADIUS A | 1.7 |
| 36 | SIMULIUM SP. A | .2 |
| 37 | FERRISSIA SP. | .2 |

DIVERSITY INDEX 3.9

Table 17. Deep Water Monitoring Stations - Petite Ponar Grab Samples

SAMPLE: P03MT3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. | 9.1 |
| 2 | ORMOSIA SP. | 9.1 |
| 3 | OLIGOCHAETA | 81.8 |

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SAMPLE: P16BN3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. | 2.1 |
| 2 | CRYPTOCHIRONOMUS | 1.4 |
| 3 | PHAENOPSECTRA SP | .7 |
| 4 | MONODIAMESA SP. | .7 |
| 5 | HETEROTRISSOCLAD | .7 |
| 6 | ORTHOCLADIUS OBU | 3.5 |
| 7 | TRISSOCLADIUS A | .7 |
| 8 | HEXATOMA SP. | .7 |
| 9 | OLIGOCHAETA | 89.4 |

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SAMPLE: P26TF3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | ISCHNURA SP. | .5 |
| 2 | PARARGYRACTIS SP | .5 |
| 3 | ZAITZEVIA PARVUL | .5 |
| 4 | CHIRONOMUS SP. | 21.3 |
| 5 | CRYPTOCHIRONOMUS | .5 |
| 6 | MICROPSECTRA SP. | .9 |
| 7 | PHAENOPSECTRA SP | 4.7 |
| 8 | | .9 |
| 9 | MONODIAMESA SP. | .5 |
| 10 | CRICOTOPUS SP. B | .5 |
| 11 | EUKIEFFERIELLA B | .5 |
| 12 | ORTHOCLADIUS (EU | .5 |
| 13 | TRISSOCLADIUS A | 2.8 |
| 14 | PROCLADIUS SP. | 1.9 |
| 15 | OLIGOCHAETA | 63.5 |

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Table 17. Continued

SAMPLE: P28NR3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | LEPTOPHLEBIA GRA | 1.2 |
| 2 | PALPOMYIA-GP SP. | 2.3 |
| 3 | DICROTENDIPES SP | 1.2 |
| 4 | MICROPSECTRA SP. | 2.3 |
| 5 | ORTHOCLADIUS OBU | 1.2 |
| 6 | PROCLADIUS SP. | 36 |
| 7 | OLIGOCHAETA | 55.8 |

DIVERSITY INDEX 1.48

SAMPLE: P30CG3

SPECIES DISTRIBUTION DATA

| SPECIES NO. | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | OECETIS SP. B | 1.8 |
| 2 | PALPOMYIA-GP SP. | 1.8 |
| 3 | CRYPTOCHIRONOMUS | 1.8 |
| 4 | MICROPSECTRA SP. | 3.6 |
| 5 | POLYPEDILUM SP.B | 1.8 |
| 6 | 33.9 | |
| 7 | HETEROTRISSOCLAD | 1.8 |
| 8 | ORTHOCLADIUS E | 32.1 |
| 9 | ORTHOCLADIUS NIG | 1.8 |
| 10 | ORTHOCLADIUS OBU | 1.8 |
| 11 | PROCLADIUS SP. | 16.1 |
| 12 | OLIGOCHAETA | 1.8 |

DIVERSITY INDEX 2.48

Table 17. Benthic Macroinvertebrate Sample Percentage Distribution and Diversity Data, Summer 1984

Shallow Water Monitoring Stations - Kick Samples

SAMPLE: S84-01

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 10.1 |
| 2 | BAETIS TRICAUDAT | 15.2 |
| 3 | CENTROPTILU SP.A | .1 |
| 4 | ATTENELLA MARGAR | 7.3 |
| 5 | DRUNELLA FLAVILI | .1 |
| 6 | DRUNELLA GRANDIS | .4 |
| 7 | SERRATELLA TIBIA | 3.5 |
| 8 | TIMPANOGA HECUBA | 0 |
| 9 | EPEORUS ALBERTAE | .2 |
| 10 | NIXE CRIDDLEI | .2 |
| 11 | NIXE SIMPLICIOID | 2.6 |
| 12 | RHITHROGENA HAGE | 1.3 |
| 13 | TRICORYTHODES MI | 6.7 |
| 14 | ALLOPERLA-GROUP | .5 |
| 15 | MALENKA SP. | 0 |
| 16 | ZAPADA CINCTIPES | 0 |
| 17 | CLAASSENI SABULO | .3 |
| 18 | HESPEROPERLA PAC | 0 |
| 19 | ISOGENOIDES ELON | 2.1 |
| 20 | ISOPERLA QUINQUE | 0 |
| 21 | SKWALA PARALLELA | .6 |
| 22 | PTERONARCELLA BA | 5.6 |
| 23 | PTERONARCYS CALI | .1 |
| 24 | BRACHYCENTRUS OC | 0 |
| 25 | ARCTOPSYCHE GRAN | 5.4 |
| 26 | CHEUMATOPSYCHE | .7 |
| 27 | HYDROPSYCHE OCCI | 4.4 |
| 28 | SYMPHITOPS COCKE | 2.4 |
| 29 | HYDROPTILA SP. | 3.7 |
| 30 | NEOTRICHIA SP. | .5 |
| 31 | OPTIOSERVUS SPP. | 2 |
| 32 | ZAITZEVIA PARVUL | 1.5 |
| 33 | ATHERIX VARIEGAT | .7 |
| 34 | MICROPSECTR SP.A | .3 |
| 35 | MICROPSECTR SP.C | .3 |
| 36 | MICROTENDIPES SP | 0 |
| 37 | PARACLADOPE SP.B | 0 |
| 38 | POLYPEDILUM SP.A | 3.7 |
| 39 | POLYPEDILUM SP.C | .1 |
| 40 | PAGASTIA SP. | .1 |
| 41 | CARDIOCLADI SP.C | .2 |
| 42 | CRICOTOPUS SP. D | .3 |
| 43 | EUKIEFFERIELLA A | .2 |
| 44 | EUKIEFFERIELLA D | 5.1 |
| 45 | EUKIEFFERIELLA E | 2.6 |
| 46 | HETEROTRISSOCLAD | .7 |
| 47 | ORTHOCLADIUS B | .2 |
| 48 | ORTHOCLADIUS F | 0 |
| 49 | ORTHOCLADIUS NIG | 4 |
| 50 | ORTHOCLADIUS OBU | .1 |
| 51 | ABLABESMYIA SP. | .2 |
| 52 | SIMULIUM SP. | 2.3 |
| 53 | HEXATOMA SP. | .4 |

DIVERSITY INDEX 4.48

Table 17. Continued

SAMPLE: S84-02
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS BICAUDATU | 0 |
| 2 | BAETIS FLAVISTRI | 1.6 |
| 3 | BAETIS HAGENI | 2.2 |
| 4 | BAETIS INSIGNIFI | 13.7 |
| 5 | BAETIS TRICAUDAT | 10.4 |
| 6 | ATTENELLA MARGAR | .4 |
| 7 | DRUNELLA DODDSI | .3 |
| 8 | DRUNELLA FLAVILI | .1 |
| 9 | DRUNELLA GRANDIS | .3 |
| 10 | EPHEMERELLA INFR | 0 |
| 11 | SERRATELLA TIBIA | 12.9 |
| 12 | TIMPANOGA HECUBA | .1 |
| 13 | EPEORUS ALBERTAE | 3.2 |
| 14 | NIXE CRIDDLEI | .2 |
| 15 | RHITHROGENA HAGE | 1.2 |
| 16 | PARALEPTOPHL DEB | 0 |
| 17 | ALLOPERLA-GROUP | 1 |
| 18 | AMPHINEMURA SP. | 0 |
| 19 | CALINEURIA CALIF | 1.4 |
| 20 | CLAASSENI SABULO | 1.9 |
| 21 | HESPEROPERLA PAC | .3 |
| 22 | SKWALA PARALLELA | .1 |
| 23 | PTERONARCYS CALI | 1.6 |
| 24 | GLOSSOSOMA SP. | .5 |
| 25 | HELICOPSYCHE BOR | 0 |
| 26 | ARCTOPSYCHE GRAN | 1.3 |
| 27 | CHEUMATOPSYCHE | 2.7 |
| 28 | HYDROPSYCHE OCCI | .3 |
| 29 | SYMPHITOPS COCKE | 3.3 |
| 30 | LEUCOTRICHIA PIC | 0 |
| 31 | NEOTRICHIA SP. | .9 |
| 32 | DICOSMOECUS SP. | .4 |
| 33 | ONOCOSMOECUS SP. | 0 |
| 34 | WORMALDIA SP. | .5 |
| 35 | PSYCHOMYIA FLAVI | .2 |
| 36 | NARPUS CONCOLOR | 0 |
| 37 | OPTIOSERVUS SPP. | 5.9 |
| 38 | ZAITZEVIA PARVUL | 7.7 |
| 39 | ANACAENA SP. | 0 |
| 40 | ATHERIX VARIEGAT | 0 |
| 41 | CLADOTANYSARSU B | .4 |
| 42 | MICROTENDIPES SP | 3.3 |
| 43 | PHAENOPSECTRA SP | 0 |
| 44 | POLYPEDILUM SP.A | 2.4 |
| 45 | TANYTARSUS SP. B | 12.8 |
| 46 | MONODIAMESA SP. | 0 |
| 47 | PAGASTIA SP. | 0 |
| 48 | CORYNONEURA SP. | .1 |
| 49 | CARDIOCLADI SP.C | 0 |
| 50 | CRICOTOPUS SP. B | 0 |
| 51 | EUKIEFFERIELLA A | 0 |
| 52 | EUKIEFFERIELLA B | 0 |
| 53 | EUKIEFFERIELLA E | .3 |
| 54 | ORTHOCLADIUS B | .1 |
| 55 | PSECTROCLADIUS C | .1 |
| 56 | THIENEMANNIELL SP | .1 |
| 57 | ABLABESMYIA SP. | 0 |

Table 17. Continued

| | | |
|---|---|---|
| 58 | CHELIFERA SP. | .1 |
| 59 | SIMULIUM SP. | .2 |
| 60 | ANTOCHA SP. | .2 |
| 61 | HEXATOMA SP. | 1.8 |
| 62 | PHYSA SP. | .6 |
| 63 | OLIGOCHAETA LUMB | .2 |

DIVERSITY INDEX 4.26

Table 17. Continued

SAMPLE: S84-04

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .3 |
| 2 | BAETIS INSIGNIFI | 11.4 |
| 3 | BAETIS TRICAUDAT | 14.2 |
| 4 | CENTROPTILU SP.A | .2 |
| 5 | ATTENELLA MARGAR | 2.7 |
| 6 | DRUNELLA DODDSI | 0 |
| 7 | DRUNELLA FLAVILI | 0 |
| 8 | DRUNELLA GRANDIS | .5 |
| 9 | EPHEMERELLA INFR | .1 |
| 10 | SERRATELLA TIBIA | 10.8 |
| 11 | TIMPANOGA HECUBA | .1 |
| 12 | EPEORUS ALBERTAE | .9 |
| 13 | NIXE CRIDDLEI | .1 |
| 14 | NIXE SIMPLICIOID | 1.4 |
| 15 | RHITHROGENA HAGE | .7 |
| 16 | PARALEPTOPHL DEB | 0 |
| 17 | TRICORYTHODES MI | .5 |
| 18 | ALLOPERLA-GROUP | .2 |
| 19 | ZAPADA CINCTIPES | .1 |
| 20 | CALINEURIA CALIF | .1 |
| 21 | CLAASSENI SABULO | .1 |
| 22 | HESPEROPERLA PAC | .2 |
| 23 | ISOGENOIDES ELON | 4.5 |
| 24 | ISOPERLA QUINQUE | .1 |
| 25 | SKWALA PARALLELA | .5 |
| 26 | PTERONARCELLA BA | 4.2 |
| 27 | PTERONARCYS CALI | .7 |
| 28 | RHAGOVELIA SP. | .4 |
| 29 | BRACHYCENTRUS OC | .1 |
| 30 | ARCTOPSYCHE GRAN | 2.2 |
| 31 | CHEUMATOPSYCHE | 3.4 |
| 32 | HYDROPSYCHE OCCI | .8 |
| 33 | SYMPHITOPS COCKE | 19.7 |
| 34 | HYDROPTILA SP. | 1 |
| 35 | NEOTRICHIA SP. | .2 |
| 36 | OECETIS SP. A | 0 |
| 37 | WORMALDIA SP. | 1.3 |
| 38 | PSYCHOMYIA FLAVI | 1.2 |
| 39 | RHYACOPHILA ANGE | 0 |
| 40 | PARARGYRACTIS SP | 0 |
| 41 | OPTIOSERVUS SPP. | 1.3 |
| 42 | ZAITZEVIA PARVUL | 1.5 |
| 43 | ATHERIX VARIEGAT | .1 |
| 44 | PALPOMY-GP SP. A | 0 |
| 45 | MICROPSECTR SP.A | .3 |
| 46 | MICROPSECTR SP.B | 0 |
| 47 | MICROTENDIPES SP | .4 |
| 48 | PARACLADOPE SP.B | 0 |
| 49 | PHAENOPSECTRA SP | .1 |
| 50 | POLYPEDILUM SP.A | 2.3 |
| 51 | POLYPEDILUM SP.C | 0 |
| 52 | TANYTARSUS SP. B | .6 |
| 53 | PAGASTIA SP. | .1 |
| 54 | CARDIOCLADI SP.C | .1 |
| 55 | CRICOTOPUS SP. B | .2 |
| 56 | EUKIEFFERIELLA B | 1.3 |
| 57 | EUKIEFFERIELLA E | 1.6 |

Table 17. Continued

| | | |
|---|---|---|
| 58 | EUKIEFFERIELLA G | 0 |
| 59 | EUKIEFFERIELLA H | .1 |
| 60 | ORTHOCLADIUS B | 1.3 |
| 61 | ORTHOCLADIUS NIG | .2 |
| 62 | ORTHOCLADIUS OBU | 1 |
| 63 | ABLABESMYIA SP. | .1 |
| 64 | CHELIFERA SP. | .1 |
| 65 | SIMULIUM SP. | 2.2 |
| 66 | ANTOCHA SP. | .3 |
| 67 | HEXATOMA SP. | .3 |
| 68 | OLIGOCHAETA | 0 |

DIVERSITY INDEX 4.22

Table 17. Continued

SAMPLE: S84-05
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .6 |
| 2 | BAETIS INSIGNIFI | 4.8 |
| 3 | BAETIS TRICAUDAT | 3.2 |
| 4 | CENTROPTILU SP.A | .1 |
| 5 | ATTENELLA MARGAR | 5 |
| 6 | SERRATELLA TIBIA | 6.9 |
| 7 | TIMPANOGA HECUBA | .2 |
| 8 | EPEORUS ALBERTAE | 1.3 |
| 9 | NIXE SIMPLICIOID | 4.1 |
| 10 | RHITHROGENA HAGE | .4 |
| 11 | PARALEPTOPHL BIC | .1 |
| 12 | TRICORYTHODES MI | 1.7 |
| 13 | ALLOPERLA-GROUP | .1 |
| 14 | CLAASSENI SABULO | .2 |
| 15 | HESPEROPERLA PAC | .2 |
| 16 | ISOGENOIDES ELON | 3.6 |
| 17 | SKWALA PARALLELA | .9 |
| 18 | PTERONARCELLA BA | 1.1 |
| 19 | PTERONARCYS CALI | .6 |
| 20 | BRACHYCENTRUS OC | .2 |
| 21 | ARCTOPSYCHE GRAN | 5 |
| 22 | CHEUMATOPSYCHE | 6.3 |
| 23 | HYDROPSYCHE OCCI | .6 |
| 24 | SYMPHITOPS COCKE | 39.5 |
| 25 | HYDROPTILA SP. | .3 |
| 26 | NEOTRICHIA SP. | .1 |
| 27 | WORMALDIA SP. | 1 |
| 28 | PSYCHOMYIA FLAVI | .1 |
| 29 | OPTIOSERVUS SPP. | .4 |
| 30 | ZAITZEVIA PARVUL | .8 |
| 31 | MICROPSECTR SP.A | 1 |
| 32 | MICROTENDIPES SP | .2 |
| 33 | PHAENOPSECTRA SP | .2 |
| 34 | POLYPEDILUM SP.A | 2.6 |
| 35 | STEMPELLINELLA | .1 |
| 36 | TANYTARSUS SP. B | .7 |
| 37 | CORYNONEURA SP. | .1 |
| 38 | EUKIEFFERIELLA A | .2 |
| [illegible] | EUKIEFFERIELLA B | .2 |
| 40 | EUKIEFFERIELLA E | 3 |
| 41 | HETEROTRISSOCLAD | .1 |
| 42 | ORTHOCLADIUS B | .9 |
| 43 | ORTHOCLADIUS NIG | .4 |
| 44 | ORTHOCLADIUS OBU | .4 |
| 45 | PARAMETRIOCNE SP | .1 |
| 46 | PSECTROCLADIUS B | .1 |
| 47 | ABLABESMYIA SP. | .1 |
| 48 | CHELIFERA SP. | .1 |
| 49 | HEXATOMA SP. | .2 |
| 50 | OLIGOCHAETA | .1 |

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Table 17. Continued

SAMPLE: 334-06
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | 0 |
| 2 | BAETIS INSIGNIFI | 9 |
| 3 | BAETIS TRICAUDAT | .6 |
| 4 | CENTROPTILU SP.A | 1.5 |
| 5 | ATTENELLA MARGAR | 3.1 |
| 6 | EPHEMERELLA INFR | 0 |
| 7 | SERRATELLA TIBIA | .6 |
| 8 | TIMPANOGA HECUBA | 2 |
| 9 | EPEORUS ALBERTAE | .1 |
| 10 | NIXE CRIDDLEI | .2 |
| 11 | NIXE SIMPLICIOID | 6.5 |
| 12 | RHITHROGENA HAGE | 0 |
| 13 | PARALEPTOPHL BIC | .5 |
| 14 | TRICORYTHODES MI | 11.5 |
| 15 | CLAASSENI SABULO | 0 |
| 16 | HESPEROPERLA PAC | 0 |
| 17 | ISOGENOIDES ELON | 2.4 |
| 18 | SKWALA PARALLELA | .4 |
| 19 | PTERONARCELLA BA | .1 |
| 20 | PTERONARCYS CALI | .1 |
| 21 | OPHIOGOMPHUS SP. | 0 |
| 22 | SIGARA SP. | .3 |
| 23 | RHAGOVELIA SP. | 0 |
| 24 | BRACHYCENTRUS OC | .2 |
| 25 | ARCTOPSYCHE GRAN | .7 |
| 26 | CHEUMATOPSYCHE | 16.7 |
| 27 | HYDROPSYCHE OCCI | .1 |
| 28 | SYMPHITOPS COCKE | 17.8 |
| 29 | HYDROPTILA SP. | 2.4 |
| 30 | NEOTRICHIA SP. | .1 |
| 31 | OECETIS SP. A | .1 |
| 32 | DICOSMOECUS SP. | 0 |
| 33 | WORMALDIA SP. | .1 |
| 34 | PSYCHOMYIA FLAVI | 1.4 |
| 35 | OREODYTES SCITIL | .5 |
| 36 | OPTIOSERVUS SPP. | .7 |
| 37 | ZAITZEVIA PARVUL | 2.1 |
| 38 | ATHERIX VARIEGAT | 0 |
| 39 | CRYPTOCHIRONOMUS | 0 |
| 40 | MICROPSECTR SP.A | .9 |
| 41 | MICROTENDIPES SP | 1.9 |
| 42 | PHAENOPSECTRA SP | .3 |
| 43 | POLYPEDILUM SP.A | 2.5 |
| 44 | TANYTARSUS SP. B | .4 |
| 45 | TANYTARSUS SP. C | .2 |
| 46 | PAGASTIA SP. | .1 |
| 47 | CORYNONEURA SP. | 0 |
| 48 | EUKIEFFERIELLA B | .2 |
| 49 | EUKIEFFERIELLA E | 1.3 |
| 50 | EUKIEFFERIELLA G | .1 |
| 51 | ORTHOCLADIUS B | 2 |
| 52 | ORTHOCLADIUS F | .1 |
| 53 | ORTHOCLADIUS OBU | 1.4 |
| 54 | ABLABESMYIA SP. | .2 |
| 55 | CHELIFERA SP. | .4 |
| 56 | ANTOCHA SP. | 0 |
| 57 | HEXATOMA SP. | .1 |
| 58 | OLIGOCHAETA | .6 |

DIVERSITY INDEX 4.05

Table 17. Continued

SAMPLE: S84-08
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS FLAVISTRI | .1 |
| 2 | BAETIS HAGENI | .2 |
| 3 | BAETIS INSIGNIFI | 6 |
| 4 | BAETIS TRICAUDAT | 1 |
| 5 | CENTROPTILU SP.A | 1.1 |
| 6 | CENTROPTILU SP.B | .1 |
| 7 | ATTENELLA MARGAR | 4 |
| 8 | DRUNELLA GRANDIS | .1 |
| 9 | EPHEMERELLA INFR | .1 |
| 10 | SERRATELLA TIBIA | .2 |
| 11 | TIMPANOGA HECUBA | .5 |
| 12 | EPEORUS ALBERTAE | .2 |
| 13 | NIXE CRIDDLEI | .4 |
| 14 | NIXE SIMPLICIOID | 2.4 |
| 15 | PARALEPTOPHL BIC | .6 |
| 16 | TRICORYTHODES MI | 24.9 |
| 17 | MALENKA SP. | .1 |
| 18 | ISOGENOIDES ELON | .7 |
| 19 | ISOPERLA QUINQUE | .2 |
| 20 | SKWALA PARALLELA | .2 |
| 21 | PTERONARCELLA BA | .2 |
| 22 | PTERONARCYS CALI | .6 |
| 23 | ARCTOPSYCHE GRAN | .7 |
| 24 | CHEUMATOPSYCHE | 4.7 |
| 25 | HYDROPSYCHE OCCI | .7 |
| 26 | SYMPHITOPS COCKE | 10.4 |
| 27 | HYDROPTILA SP. | .7 |
| 28 | NEOTRICHIA SP. | .2 |
| 29 | OECETIS SP. A | .3 |
| 30 | WORMALDIA SP. | .1 |
| 31 | PSYCHOMYIA FLAVI | .7 |
| 32 | PARARGYRACTIS SP | .1 |
| 33 | OPTIOSERVUS SPP. | .5 |
| 34 | ZAITZEVIA PARVUL | .4 |
| 35 | CHIRONOMUS SP. | .2 |
| 36 | MICROPSECTR SP.A | .3 |
| 37 | MICROTENDIPES SP | 2.4 |
| 38 | PHAENOPSECTRA SP | .3 |
| 39 | POLYPEDILUM SP.A | 9.8 |
| 40 | POLYPEDILUM SP.C | .5 |
| 41 | TANYTARSUS SP. B | 2.3 |
| 42 | TANYTARSUS SP. C | .2 |
| 43 | MONODIAMESA SP. | .1 |
| 44 | PAGASTIA SP. | .3 |
| 45 | CARDIOCLADI SP.C | .5 |
| 46 | CRICOTOPUS SP. B | .7 |
| 47 | EUKIEFFERIELLA B | .1 |
| 48 | EUKIEFFERIELLA E | 1.2 |
| 49 | EUKIEFFERIELLA G | .1 |
| 50 | EUKIEFFERIELLA H | .1 |
| 51 | ORTHOCLADIUS B | 2.7 |
| 52 | ORTHOCLADIUS NIG | .1 |
| 53 | ORTHOCLADIUS OBU | .6 |
| 54 | ABLABESMYIA SP. | .2 |
| 55 | ANTOCHA SP. | .2 |
| 56 | OLIGOCHAETA | 14.1 |
| 57 | OLIGOCHAETA LUMB | .2 |

DIVERSITY INDEX 3.09

Table 17. Continued

SAMPLE: 524-09

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .4 |
| 2 | BAETIS INSIGNIFI | 19.1 |
| 3 | BAETIS TRICAUDAT | 2.8 |
| 4 | CENTROPTILU SP.A | .4 |
| 5 | ATTENELLA MARGAR | 5 |
| 6 | EPHEMERELLA INFR | .1 |
| 7 | SERRATELLA TIBIA | 2.3 |
| 8 | TIMPANOGA HECUBA | .4 |
| 9 | EPEORUS ALBERTAE | .8 |
| 10 | NIXE CRIDDLEI | .3 |
| 11 | NIXE SIMPLICIOID | 3.8 |
| 12 | RHITHROGENA HAGE | .1 |
| 13 | PARALEPTOPHL BIC | .2 |
| 14 | PARALEPTOPHL DEB | .7 |
| 15 | TRICORYTHODES MI | 6.1 |
| 16 | ISOGENOIDES ELON | 1.6 |
| 17 | ISOPERLA QUINQUE | .1 |
| 18 | SKWALA PARALLELA | .3 |
| 19 | PTERONARCELLA BA | .3 |
| 20 | PTERONARCYS CALI | .2 |
| 21 | BRACHYCENTRUS OC | .2 |
| 22 | ARCTOPSYCHE GRAN | 1.6 |
| 23 | CHEUMATOPSYCHE | 11.1 |
| 24 | HYDROPSYCHE OCCI | 3.7 |
| 25 | SYMPHITOPS COCKE | 10.4 |
| 26 | HYDROPTILA SP. | 6 |
| 27 | OECETIS SP. A | .2 |
| 28 | PSYCHOMYIA FLAVI | .8 |
| 29 | OREODYTES SCITIL | .3 |
| 30 | OPTIOSERVUS SPP. | .5 |
| 31 | ZAITZEVIA PARVUL | .9 |
| 32 | CRYPTOCHIRONOMUS | .2 |
| 33 | MICROPSECTR SP.A | .7 |
| 34 | MICROPSECTR SP.C | .1 |
| 35 | MICROTENDIPES SP | 1.4 |
| 36 | PARATANYTARSUS | .1 |
| 37 | PHAENOPSECTRA SP | .6 |
| 38 | POLYPEDILUM SP.A | 6.4 |
| 39 | POLYPEDILUM SP.C | .3 |
| 40 | TANYTARSUS SP. B | .5 |
| 41 | PAGASTIA SP. | .2 |
| 42 | CRICOTOPUS SP. D | .1 |
| 43 | EUKIEFFERIELLA B | .3 |
| 44 | EUKIEFFERIELLA E | 1.9 |
| 45 | EUKIEFFERIELLA G | .1 |
| 46 | ORTHOCLADIUS B | 2.9 |
| 47 | ORTHOCLADIUS OBU | 2.2 |
| 48 | ABLABESMYIA SP. | .1 |
| 49 | CHELIFERA SP. | .1 |
| 50 | SIMULIUM SP. | .1 |
| 51 | ANTOCHA SP. | .2 |
| 52 | HEXATOMA SP. | .5 |
| 53 | OLIGOCHAETA | .1 |

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Table 17. Continued

SAMPLE: S84-10
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | AMETROPUS SP. | .1 |
| 2 | BAETIS INSIGNIFI | 16.3 |
| 3 | BAETIS TRICAUDAT | 5.3 |
| 4 | ATTENELLA MARGAR | 13.7 |
| 5 | DRUNELLA FLAVILI | .1 |
| 6 | DRUNELLA GRANDIS | .1 |
| 7 | EPHEMERELLA INFR | 3.4 |
| 8 | SERRATELLA TIBIA | 4 |
| 9 | TIMPANOGA HECUBA | .1 |
| 10 | EPEORUS ALBERTAE | .3 |
| 11 | NIXE SIMPLICIOID | 9.9 |
| 12 | RHITHROGENA HAGE | 4.9 |
| 13 | PARALEPTOPHL BIC | .2 |
| 14 | TRICORYTHODES MI | 1.2 |
| 15 | CLAASSENI SABULO | .2 |
| 16 | ISOGENOIDES ELON | 1.8 |
| 17 | SKWALA PARALLELA | .8 |
| 18 | PTERONARCELLA BA | 1.4 |
| 19 | BRACHYCENTRUS OC | .1 |
| 20 | GLOSSOSOMA SP. | .6 |
| 21 | PROTOPTILA SP. | .1 |
| 22 | ARCTOPSYCHE GRAN | .8 |
| 23 | CHEUMATOPSYCHE | 2.6 |
| 24 | HYDROPSYCHE SP.A | .1 |
| 25 | HYDROPSYCHE OCCI | .3 |
| 26 | SYMPHITOPS COCKE | 3.4 |
| 27 | HYDROPTILA SP. | .8 |
| 28 | NEOTRICHIA SP. | .1 |
| 29 | OPTIOSERVUS SPP. | 6.9 |
| 30 | ZAITZEVIA PARVUL | 4.4 |
| 31 | CLADOTANYTA SP.A | .3 |
| 32 | MICROPSECTR SP.A | 1.6 |
| 33 | MICROTENDIPES SP | .2 |
| 34 | PHAENOPSECTRA SP | .2 |
| 35 | POLYPEDILUM SP.A | 1.3 |
| 36 | TANYTARSUS SP. B | 1.3 |
| 37 | TANYTARSUS SP. C | .1 |
| 38 | CARDIOCLADI SP.B | .1 |
| 39 | CRICOTOPUS SP. B | .2 |
| 40 | EUKIEFFERIELLA B | .5 |
| 41 | EUKIEFFERIELLA E | .9 |
| 42 | ORTHOCLADIUS B | .5 |
| 43 | ORTHOCLADIUS C | .1 |
| 44 | ORTHOCLADIUS NIG | .2 |
| 45 | ORTHOCLADIUS OBU | 1 |
| 46 | SYNORTHOCLADIUS | .1 |
| 47 | THIENEMANIELL SP | .1 |
| 48 | ABLABESMYIA SP. | .1 |
| 49 | CHELIFERA SP. | .6 |
| 50 | SIMULIUM SP. | 2.7 |
| 51 | [illegible] SP. | .1 |
| 52 | HEXATOMA SP. | .2 |
| 53 | PISIDIUM SP. | .1 |
| 54 | OLIGOCHAETA | .6 |
| 55 | OLIGOCHAETA LUMB | 1.3 |
| 56 | HIRUDINEA | .1 |

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Table 17. Continued

SAMPLE: S84-11

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | 0 |
| 2 | BAETIS INSIGNIFI | 21.2 |
| 3 | BAETIS TRICAUDAT | 7 |
| 4 | CENTROPTILU SP.A | .2 |
| 5 | ATTENELLA MARGAR | 4.4 |
| 6 | DRUNELLA GRANDIS | .1 |
| 7 | EPHEMERELLA INFR | 1.5 |
| 8 | SERRATELLA TIBIA | 2 |
| 9 | EPEORUS ALBERTAE | .1 |
| 10 | NIXE CRIDDLEI | .1 |
| 11 | NIXE SIMPLICIOID | 12.1 |
| 12 | RHITHROGENA HAGE | 6.3 |
| 13 | PARALEPTOPHL BIC | 0 |
| 14 | PARALEPTOPHL DEB | .1 |
| 15 | TRICORYTHODES MI | 1.1 |
| 16 | CLAASSENI SABULO | .2 |
| 17 | ISOGENOIDES ELON | 1.9 |
| 18 | SKWALA PARALLELA | .1 |
| 19 | PTERONARCELLA BA | .7 |
| 20 | PTERONARCYS CALI | .1 |
| 21 | BRACHYCENTRUS OC | .1 |
| 22 | ARCTOPSYCHE GRAN | 1.1 |
| 23 | CHEUMATOPSYCHE | 1.2 |
| 24 | HYDROPSYCHE OCCI | 15.8 |
| 25 | SYMPHITOPS COCKE | 1.7 |
| 26 | HYDROPTILA SP. | 2.8 |
| 27 | NEOTRICHIA SP. | 0 |
| 28 | OECETIS SP. A | 0 |
| 29 | OREODYTES SCITIL | .1 |
| 30 | OPTIOSERVUS SPP. | .7 |
| 31 | ZAITZEVIA PARVUL | .5 |
| 32 | ATHERIX VARIEGAT | .1 |
| 33 | CRYPTOCHIRONOMUS | 0 |
| 34 | MICROPSECTR SP.A | 1.2 |
| 35 | MICROPSECTR SP.C | .1 |
| 36 | MICROTENDIPES SP | .6 |
| 37 | PARATANYTARSUS | 0 |
| 38 | PHAENOPSECTRA SP | .2 |
| 39 | POLYPEDILUM SP.A | 2.3 |
| 40 | POLYPEDILUM SP.C | .2 |
| 41 | CARDIOCLADI SP.C | .1 |
| 42 | CRICOTOPUS SP. B | 1 |
| 43 | EUKIEFFERIELLA B | .5 |
| 44 | EUKIEFFERIELLA E | 1 |
| 45 | ORTHOCLADIUS B | 1.3 |
| 46 | ORTHOCLADIUS NIG | 0 |
| 47 | ORTHOCLADIUS OBU | 1.2 |
| 48 | SYNORTHOCLADIUS | .1 |
| 49 | CHELIFERA SP. | .6 |
| 50 | SIMULIUM SP. | 5.6 |
| 51 | PROTANYDERUS SP. | 0 |
| 52 | HEXATOMA SP. | .2 |
| 53 | OLIGOCHAETA | 0 |

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Table 17. Continued

SAMPLE: S34-13
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 9.5 |
| 2 | BAETIS TRICAUDAT | .3 |
| 3 | CENTROPTILU SP.A | 6.[illegible] |
| 4 | ATTENELLA MARGAR | 10.1 |
| 5 | DRUNELLA GRANDIS | .1 |
| 6 | EPHEMERELLA INFR | 1.9 |
| 7 | SERRATELLA TIBIA | .1 |
| 8 | NIXE SIMPLICIOID | 40.6 |
| 9 | PARALEPTOPHL BIC | 1.4 |
| 10 | PARALEPTOPHL DEB | 1.2 |
| 11 | TRICORYTHODES MI | 7.6 |
| 12 | CLAASSENI SABULO | .1 |
| 13 | ISOGENOIDES ELON | 2.8 |
| 14 | ISOPERLA QUINQUE | .1 |
| 15 | SKWALA PARALLELA | .1 |
| 16 | BRACHYCENTRUS OC | .1 |
| 17 | ARCTOPSYCHE GRAN | .9 |
| 18 | CHEUMATOPSYCHE | .4 |
| 19 | HYDROPSYCHE OCCI | .8 |
| 20 | SYMPHITOPS COCKE | .4 |
| 21 | HYDROPTILA SP. | 4.2 |
| 22 | LEPIDOSTOMA SP.A | .1 |
| 23 | OECETIS SP. A | .6 |
| 24 | ORMODYTES SCITIL | .6 |
| 25 | OPTIOSERVUS SPP. | .2 |
| 26 | ZAITZEVIA PARVUL | .2 |
| 27 | ATHERIX VARIEGAT | .1 |
| 28 | MICROPSECTR SP.A | .8 |
| 29 | MICROPSECTR SP.C | .1 |
| 30 | MICROTENDIPES SP | .9 |
| 31 | PARACLADOPE SP.B | .1 |
| 32 | PHAENOPSECTRA SP | .6 |
| 33 | POLYPEDILUM SP.A | 1.2 |
| 34 | POLYPEDILUM SP.C | .4 |
| 35 | TANYTARSUS SP. B | .3 |
| 36 | CARDIOCLADI SP.C | .1 |
| 37 | EUKIEFFERIELLA B | .1 |
| 38 | EUKIEFFERIELLA E | .1 |
| 39 | ORTHOCLADIUS B | .4 |
| 40 | ORTHOCLADIUS OBU | .9 |
| 41 | ABLABESMYIA SP. | .2 |
| 42 | CHELIFERA SP. | .1 |
| 43 | HEXATOMA SP. | .6 |
| 44 | OLIGOCHAETA | [illegible].4 |

[illegible] 3.[illegible]

Table 17. Continued

SAMPLE: S84-14
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .1 |
| 2 | BAETIS INSIGNIFI | 23.3 |
| 3 | BAETIS TRICAUDAT | 2.2 |
| 4 | CENTROPTILU SP.A | .3 |
| 5 | ATTENELLA MARGAR | 5.5 |
| 6 | EPHEMERELLA INFR | .4 |
| 7 | SERRATELLA TIBIA | .3 |
| 8 | TIMPANOGA HECUBA | .3 |
| 9 | NIXE CRIDDLEI | .3 |
| 10 | NIXE SIMPLICIOID | 17.5 |
| 11 | PARALEPTOPHL DEB | .1 |
| 12 | TRICORYTHODES MI | 4.7 |
| 13 | CLAASSENI SABULO | .1 |
| 14 | ISOGENOIDES ELON | 1.3 |
| 15 | BRACHYCENTRUS OC | .3 |
| 16 | ARCTOPSYCHE GRAN | .1 |
| 17 | CHEUMATOPSYCHE | 2.2 |
| 18 | HYDROPSYCHE OCCI | 2 |
| 19 | SYMPHITOPS COCKE | .3 |
| 20 | SYMPHITOPS SLOSS | .1 |
| 21 | HYDROPTILA SP. | 10.8 |
| 22 | OECETIS SP. A | .5 |
| 23 | OPTIOSERVUS SPP. | .1 |
| 24 | ZAITZEVIA PARVUL | .1 |
| 25 | CRYPTOCHIRONOMUS | .4 |
| 26 | DICROTENDIP SP.C | .1 |
| 27 | MICROPSECTR SP.A | .7 |
| 28 | MICROPSECTR SP.C | .1 |
| 29 | MICROTENDIPES SP | 15.1 |
| 30 | PHAENOPSECTRA SP | .3 |
| 31 | POLYPEDILUM SP.A | 2.7 |
| 32 | POLYPEDILUM SP.C | .1 |
| 33 | TANYTARSUS SP. B | .1 |
| 34 | CARDIOCLADI SP.C | .1 |
| 35 | CRICOTOPUS SP. B | .1 |
| 36 | EUKIEFFERIELLA E | .4 |
| 37 | ORTHOCLADIUS B | .8 |
| 38 | ORTHOCLADIUS OBU | 1.7 |
| 39 | ABLABESMYIA SP. | .1 |
| 40 | SIMULIUM SP. | .3 |
| 41 | HEXATOMA SP. | .4 |
| 42 | OLIGOCHAETA | 2.3 |

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Table 17. Continued

SAMPLE: S34-15
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 26.2 |
| 2 | BAETIS TRICAUDAT | 7.3 |
| 3 | CENTROPTILU SP.A | .4 |
| 4 | ATTENELLA MARGAR | 5.3 |
| 5 | EPHEMERELLA INFR | .7 |
| 6 | SERRATELLA TIBIA | 1 |
| 7 | NIXE CRIDDLEI | .1 |
| 8 | NIXE SIMPLICIOID | 15.3 |
| 9 | RHITHROGENA HAGE | .2 |
| 10 | PARALEPTOPHL BIC | 1 |
| 11 | PARALEPTOPHL DEB | .2 |
| 12 | TRICORYTHODES MI | 4.2 |
| 13 | CLAASSENI SABULO | .4 |
| 14 | ISOGENOIDES ELON | .1 |
| 15 | SKWALA PARALLELA | .1 |
| 16 | BRACHYCENTRUS OC | .1 |
| 17 | ARCTOPSYCHE GRAN | .6 |
| 18 | CHEUMATOPSYCHE | 1.8 |
| 19 | HYDROPSYCHE OCCI | 14.4 |
| 20 | SYMPHITOPS COCKE | .5 |
| 21 | HYDROPTILA SP. | 1.2 |
| 22 | OECETIS SP. A | .1 |
| 23 | OREODYTES SCITIL | 1.1 |
| 24 | OPTIOSERVUS SPP. | .6 |
| 25 | ZAITZEVIA PARVUL | .1 |
| 26 | MICROPSECTR SP.A | 1.3 |
| 27 | MICROPSECTR SP.C | .1 |
| 28 | MICROTENDIPES SP | .5 |
| 29 | PARATANYTARSUS | .1 |
| 30 | PHAENOPSECTRA SP | 2.1 |
| 31 | POLYPEDILUM SP.A | 4.8 |
| 32 | POLYPEDILUM SP.C | .1 |
| 33 | ROBACKIA SP. | .1 |
| 34 | TANYTARSUS SP. B | .1 |
| 35 | CORYNONEURA SP. | .1 |
| 36 | CRICOTOPUS SP. B | .2 |
| 37 | EUKIEFFERIELLA B | .2 |
| 38 | EUKIEFFERIELLA E | 1.7 |
| 39 | EUKIEFFERIELLA H | .1 |
| 40 | ORTHOCLADIUS B | .5 |
| 41 | ORTHOCLADIUS NIG | .2 |
| 42 | ORTHOCLADIUS OBU | 2.3 |
| 43 | SYNORTHOCLADIUS | .4 |
| 44 | ABLABESMYIA SP. | .2 |
| 45 | SIMULIUM SP. | 1.3 |
| 46 | HEXATOMA SP. | .1 |
| 47 | OLIGOCHAETA | .1 |

DIVERSITY INDEX 3.7

Table 17. Continued

SAMPLE: S34-19
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 9.1 |
| 2 | BAETIS TRICAUDAT | .4 |
| 3 | CENTROPTILU SP.A | 5.3 |
| 4 | CENTROPTILU SP.B | 1.4 |
| 5 | ATTENELLA MARGAR | 7.3 |
| 6 | DRUNELLA GRANDIS | .2 |
| 7 | EPHEMERELLA INFR | .1 |
| 8 | SERRATELLA TIBIA | .4 |
| 9 | EPEORUS ALBERTAE | .1 |
| 10 | NIXE CRIDDLEI | .3 |
| 11 | NIXE SIMPLICIOID | 6 |
| 12 | PARALEPTOPHL BIC | .4 |
| 13 | PARALEPTOPHL DEB | .9 |
| 14 | PARATEPLOPHLEBIA | 0 |
| 15 | TRICORYTHODES MI | 2.1 |
| 16 | CLAASSENI SABULO | 0 |
| 17 | HESPEROPERLA PAC | 0 |
| 18 | ISOGENOIDES ELON | 1.1 |
| 19 | ISOPERLA QUINQUE | 0 |
| 20 | SKWALA PARALLELA | .2 |
| 21 | SIGARA SP. | .2 |
| 22 | BRACHYCENTRUS OC | 0 |
| 23 | GLOSSOSOMA SP. | 0 |
| 24 | ARCTOPSYCHE GRAN | .3 |
| 25 | CHEUMATOPSYCHE | 19.1 |
| 26 | HYDROPSYCHE OCCI | 9.9 |
| 27 | SYMPHITOPS COCKE | 7.8 |
| 28 | HYDROPTILA SP. | 6.8 |
| 29 | NEOTRICHIA SP. | 0 |
| 30 | OECETIS SP. A | .2 |
| 31 | PSYCHOMYIA FLAVI | 3.3 |
| 32 | OREODYTES SCITIL | .2 |
| 33 | OPTIOSERVUS SPP. | .3 |
| 34 | ZAITZEVIA PARVUL | .2 |
| 35 | BRYCHIUS SP. | 0 |
| 36 | CRYPTOCHIRONOMUS | .1 |
| 37 | LENZIELLA SP. | 0 |
| 38 | MICROPSECTR SP.A | 2.4 |
| 39 | MICROTENDIPES SP | 7.6 |
| 40 | POLYPEDILUM SP.A | 1.8 |
| 41 | TANYTARSUS SP. A | .2 |
| 42 | XENOCHIRONOMUS | .1 |
| 43 | PAGASTIA SP. | .1 |
| 44 | CORYNONEURA SP. | 0 |
| 45 | EUKIEFFERIELLA B | .2 |
| 46 | EUKIEFFERIELLA E | .9 |
| 47 | ORTHOCLADIUS B | .9 |
| 48 | ORTHOCLADIUS C | .1 |
| 49 | ORTHOCLADIUS NIG | .2 |
| 50 | ORTHOCLADIUS OBU | .2 |
| 51 | SYNORTHOCLADIUS | .1 |
| 52 | ABLABESMYIA SP. | .1 |
| 53 | ANTOCHA SP. | .2 |
| 54 | OLIGOCHAETA | 0 |

DIVERSITY INDEX 4.05

Table 17. Continued

SAMPLE: 384-21
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .3 |
| 2 | BAETIS INSIGNIFI | 2.5 |
| 3 | BAETIS TRICAUDAT | 1.4 |
| 4 | CENTROPTILU SP.A | .3 |
| 5 | CENTROPTILU SP.B | .7 |
| 6 | ATTENELLA MARGAR | 11.0 |
| 7 | DRUNELLA GRANDIS | .2 |
| 8 | EPHEMERELLA INFR | .5 |
| 9 | SERRATELLA TIBIA | 2.7 |
| 10 | TIMPANOGA HECUBA | 1.4 |
| 11 | EPEORUS ALBERTAE | 2.7 |
| 12 | HEPTAGENIA SOLIT | 1 |
| 13 | NIXE CRIDDLEI | 0 |
| 14 | NIXE SIMPLICIOID | 3.3 |
| 15 | PARALEPTOPHL BIC | 1.5 |
| 16 | PARALEPTOPHL DEB | .9 |
| 17 | TRICORYTHODES MI | 5.3 |
| 18 | CLAASSENI SABULO | .4 |
| 19 | ISOGENOIDES ELON | 1.6 |
| 20 | SKWALA PARALLELA | .1 |
| 21 | PTERONARCYS CALI | .2 |
| 22 | RHAGOVELIA SP. | 0 |
| 23 | BRACHYCENTRUS OC | .8 |
| 24 | ARCTOPSYCHE GRAN | 2.6 |
| 25 | CHEUMATOPSYCHE | 17.3 |
| 26 | HYDROPSYCHE OCCI | 2.5 |
| 27 | SYMPHITOPS COCKE | 6.7 |
| 28 | SYMPHITOPS SLOSS | .6 |
| 29 | HYDROPTILA SP. | 5.3 |
| 30 | NEOTRICHIA SP. | .1 |
| 31 | CERACLEA SP. | .2 |
| 32 | OECETIS SP. A | .7 |
| 33 | DICOSMOECUS SP. | 0 |
| 34 | PSYCHOMYIA FLAVI | 1.9 |
| 35 | OREODYTES SCITIL | .1 |
| 36 | OPTIOSERVUS SPP. | .5 |
| 37 | ZAITZEVIA PARVUL | .3 |
| 38 | CRYPTOCHIRONOMUS | .2 |
| 39 | MICROPSECTR SP.A | .5 |
| 40 | MICROTENDIPES SP | 12.6 |
| 41 | PHAENOPSECTRA SP | .6 |
| 42 | POLYPEDILUM SP.A | 1.6 |
| 43 | POLYPEDILUM SP.C | 0 |
| 44 | TANYTARSUS SP. B | .3 |
| 45 | PAGASTIA SP. | .3 |
| 46 | EUKIEFFERIELLA D | 0 |
| 47 | EUKIEFFERIELLA E | [illegible] |
| 48 | [illegible] | 1.1 |
| 49 | [illegible] | [illegible] |
| 50 | [illegible] | .1 |
| 51 | [illegible] | [illegible] |
| 52 | ABLABESMYIA SP. | .2 |
| 53 | SIMULIUM SP. | 0 |
| 54 | OLIGOCHAETA | .2 |
| 55 | OLIGOCHAETA LUMB | .5 |
| 56 | HIRUDINEA | 0 |

DIVERSITY INDEX 4.30

Table 17. Continued

SAMPLE: S84-23

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | .2 |
| 2 | CENTROPTILU SP.A | .2 |
| 3 | CAENIS SIMULANS | [illegible] |
| 4 | ATTENELLA MARGAR | [illegible].7 |
| 5 | HEXAGENIA LIMBAT | .2 |
| 6 | NIXE CRIDDLEI | .5 |
| 7 | NIXE SIMPLICIOID | 5.1 |
| 8 | STENONEMA SP. | 2.5 |
| 9 | PARALEPTOPHL BIC | 5.2 |
| 10 | PARALEPTOPHL DEB | [illegible] |
| 11 | TRICORYTHODES MI | .7 |
| 12 | AESHNA SP. | .5 |
| 13 | OPHIOGOMPHUS SP. | 1.2 |
| 14 | CHEUMATOPSYCHE | .5 |
| 15 | HYDROPTILA SP. | .2 |
| 16 | LEPIDOSTOMA SP.A | .2 |
| 17 | CERACLEA SP. | .2 |
| 18 | DICOSMOECUS SP. | .5 |
| 19 | PARARGYRACTIS SP | .2 |
| 20 | CREODYTES SCITIL | .2 |
| 21 | DUBIRAPHIA SP. | 2.2 |
| 22 | P.LPOMY-GP SP. B | .2 |
| 23 | DICROTENDIP SP.B | .5 |
| 24 | MICROTENDIPES SP | 17.[illegible] |
| 25 | PARACHIRONOMUS | 1.2 |
| 26 | POLYPEDILUM SP.A | .2 |
| 27 | XENOCHIRONOMUS | .2 |
| 28 | PAGASTIA SP. | 1 |
| 29 | ORTHOCLADIUS B | .5 |
| 30 | ABLABESMYIA SP. | 1 |
| 31 | HYALELLA AZTECA | 10.3 |
| 32 | GYRAULUS SP. | 11.5 |
| 33 | LYMNAEA SP. | 1.7 |
| 34 | PHYSA SP. | 26.2 |
| 35 | OLIGOCHAETA | .2 |
| 36 | OLIGOCHAETA LUMB | 1.2 |
| 37 | DINA SP. | 1 |
| 38 | DINA SP. | 1 |

DIVERSITY INDEX 3.7

Table 17. Continued

SAMPLE: S34-24
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .4 |
| 2 | BAETIS TRICAUDAT | .2 |
| 3 | CENTROPTILU SP.A | .4 |
| 4 | ATTENELLA MARGAR | 3 |
| 5 | TIMPANOGA HECUBA | .1 |
| 6 | EPEORUS ALBERTAE | .1 |
| 7 | HEPTAGENIA SOLIT | .4 |
| 8 | NIXE CRIDDLEI | .2 |
| 9 | NIXE SIMPLICIOID | 1.7 |
| 10 | STENONEMA SP. | 1.6 |
| 11 | PARALEPTOPHL BIC | 2.3 |
| 12 | PARALEPTOPHL DEB | .2 |
| 13 | TRICORYTHODES MI | 4.2 |
| 14 | ISOGENOIDES ELON | .1 |
| 15 | PTERONARCYS CALI | .1 |
| 16 | OPHIOGOMPHUS SP. | .1 |
| 17 | ARCTOPSYCHE GRAN | .1 |
| 18 | CHEUMATOPSYCHE | 16.4 |
| 19 | HYDROPSYCHE OCCI | .1 |
| 20 | SYMPHITOPS COCKE | 5.9 |
| 21 | HYDROPTILA SP. | 1.4 |
| 22 | OREODYTES SCITIL | .8 |
| 23 | ZAITZEVIA PARVUL | 1.3 |
| 24 | CHIRONOMUS SP. | .1 |
| 25 | CRYPTOCHIRONOMUS | .2 |
| 26 | MICROPSECTR SP.A | 1.2 |
| 27 | MICROTENDIPES SP | 39.2 |
| 28 | PHAENOPSECTRA SP | .1 |
| 29 | POLYPEDILUM SP.A | 1.1 |
| 30 | SYMPOTTHASTIA SP | .1 |
| 31 | EUKIEFFERIELLA E | .6 |
| 32 | ORTHOCLADIUS B | 4 |
| 33 | ORTHOCLADIUS OBU | 5.1 |
| 34 | SYNORTHOCLADIUS | .1 |
| 35 | ABLABESMYIA SP. | .2 |
| 36 | PROCLADIUS SP. A | .1 |
| 37 | SIMULIUM SP. | .1 |
| 38 | HYALELLA AZTECA | .1 |
| 39 | OLIGOCHAETA LUMB | .2 |

DIVERSITY INDEX 3.25

Table 17. Continued

SAMPLE: 384-25
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .7 |
| 2 | BAETIS TRICAUDAT | .2 |
| 3 | CENTROPTILU SP.A | .5 |
| 4 | ATTENELLA MARGAR | 13.1 |
| 5 | SERRATELLA TIBIA | .4 |
| 6 | TIMPANOGA HECUBA | 1.4 |
| 7 | EPEORUS ALBERTAE | .6 |
| 8 | HEPTAGENIA SOLIT | .4 |
| 9 | NIXE SIMPLICIOID | 9.6 |
| 10 | STENONEMA SP. | 1.3 |
| 11 | TRICORYTHODES MI | [illegible] |
| 12 | CLAASSENI SABULO | .1 |
| 13 | ISOGENOIDES ELON | .1 |
| 14 | OPHIOGOMPHUS SP. | .9 |
| 15 | SIGARA SP. | .1 |
| 16 | GLOSSOSOMA SP. | .[illegible] |
| 17 | CHEUMATOPSYCHE | 33 |
| 18 | HYDROPSYCHE OCCI | .2 |
| 19 | SYMPHITOPS COCKE | 2.1 |
| 20 | HYDROPTILA SP. | .3 |
| 21 | OECETIS SP. A | .[illegible] |
| 22 | DICOSMOECUS SP. | .[illegible] |
| 23 | PSYCHOMYIA FLAVI | .[illegible] |
| 24 | PARARGYRACTIS SP | .1 |
| 25 | OREODYTES SCITIL | 1.2 |
| 26 | ZAITZEVIA PARVUL | 1.1 |
| 27 | CRYPTOCHIRONOMUS | 1.6 |
| 28 | MICROPSECTR SP.A | 1.5 |
| 29 | MICROTENDIPES SP | [illegible].5 |
| 30 | POLYPEDILUM SP.A | .6 |
| 31 | XENOCHIRONOMUS | .1 |
| 32 | CARDIOCLADIUS SP | .[illegible] |
| 33 | ORTHOCLADIUS B | 1.4 |
| 34 | ORTHOCLADIUS NIG | .1 |
| 35 | ORTHOCLADIUS OBU | .2 |
| 36 | SYNORTHOCLADIUS | .1 |
| 37 | ABLABESMYIA SP. | 1.[illegible] |
| 38 | SIMULIUM SP. | .1 |
| 39 | HEXATOMA SP. | .1 |
| 40 | HYALELLA AZTECA | .1 |
| 41 | LYMNAEA SP. | 1.2 |
| 42 | OLIGOCHAETA LUMB | 2.5 |

DIVERSITY INDEX 3.51

Table 17. Continued

SAMPLE: S84-27

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 1.1 |
| 2 | CENTROPTILU SP.A | 14 |
| 3 | ATTENELLA MARGAR | 1.1 |
| 4 | HEPTAGENIA SOLIT | 1.1 |
| 5 | NIXE SIMPLICIOID | 1.1 |
| 6 | STENONEMA SP. | 1.1 |
| 7 | TRICORYTHODES MI | 2.2 |
| 8 | PARARGYRACTIS SP | 1.1 |
| 9 | DUBIRAPHIA SP. | 1.1 |
| 10 | OPTIOSERVUS SPP. | 1.1 |
| 11 | MICROTENDIPES SP | 2.2 |
| 12 | PARACHIRONOMUS | 2.2 |
| 13 | HYALELLA AZTECA | 1.1 |
| 14 | OLIGOCHAETA | 1.1 |
| 15 | OLIGOCHAETA LUMB | 68.8 |

DIVERSITY INDEX 1.63

SAMPLE: S84-31

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | HELOPHORUS SP. | 2.9 |
| 2 | OLIGOCHAETA LUMB | 97.1 |

DIVERSITY INDEX .19

Table 17. Deep Water Monitoring Stations - Petite Ponar Grab Samples

SAMPLE: 03-2/7

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CRICOTOPUS SP. E | 100 |

DIVERSITY INDEX 0

SAMPLE: 13/7

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | .6 |
| 2 | CENTROPTILU SP.A | 1.3 |
| 3 | NIXE SIMPLICIOID | .6 |
| 4 | RHITHROGENA HAGE | .6 |
| 5 | TRICORYTHODES MI | 9.7 |
| 6 | HYDROPTILA SP. | 1.9 |
| 7 | OPTIOSERVUS SPP. | .6 |
| 8 | CHIRONOMUS SP. | 1.3 |
| 9 | CRYPTOCHIRONOMUS | 1.9 |
| 10 | MICROTENDIPES SP | 15.6 |
| 11 | PARACLADOPE SP.C | .6 |
| 12 | PARATANYTARSUS | 2.6 |
| 13 | PHAENOPSECTRA SP | 56.5 |
| 14 | RHEOTANYTARSUS | 1.3 |
| 15 | ORTHOCLADIUS OBU | .6 |
| 16 | OLIGOCHAETA | 3.9 |

DIVERSITY INDEX 2.28

SAMPLE: 15/7

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | NIXE SIMPLICIOID | 4.6 |
| 2 | PARALEPTOPHL DEB | 1.1 |
| 3 | TRICORYTHODES MI | 3.4 |
| 4 | CHEUMATOPSYCHE | 1.1 |
| 5 | MICROTENDIPES SP | 20.7 |
| 6 | PHAENOPSECTRA SP | 18.4 |
| 7 | RHEOTANYTARSUS | 1.1 |
| 8 | ORTHOCLADIUS OBU | 1.1 |
| 9 | PSECTROCLADIUS B | 3.4 |
| 10 | OLIGOCHAETA | 44.8 |

DIVERSITY INDEX 2.27

Table 17. Continued

SAMPLE: 16/7

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .9 |
| 2 | CENTROPTILU SP.A | .9 |
| 3 | NIXE SIMPLICIOID | 3.8 |
| 4 | RHITHROGENA HAGE | .9 |
| 5 | PARALEPTOPHL DEB | .9 |
| 6 | TRICORYTHODES MI | .9 |
| 7 | HYDROPTILA SP. | 4.7 |
| 8 | PSYCHOMYIA FLAVI | .9 |
| 9 | CRYPTOCHIRONOMUS | 2.8 |
| 10 | MICROTENDIPES SP | 3.8 |
| 11 | PARACLADOPE SP.B | .9 |
| 12 | PARACLADOPE SP.C | 2.8 |
| 13 | PHAENOPSECTRA SP | 17.9 |
| 14 | ROBACKIA SP. | .9 |
| 15 | RHEOTANYTARSUS | 2.8 |
| 16 | CORYNONEURA SP. | .9 |
| 17 | ORTHOCLADIUS B | 1.9 |
| 18 | ORTHOCLADIUS NIG | 3.8 |
| 19 | ORTHOCLADIUS OBU | 2.8 |
| 20 | PSECTROCLADIUS B | .9 |
| 21 | SYNORTHOCLADIUS | 4.7 |
| 22 | OLIGOCHAETA | 38.7 |

DIVERSITY INDEX 3.25

SAMPLE: 17/7

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 10 |
| 2 | NIXE SIMPLICIOID | 40 |
| 3 | RHITHROGENA HAGE | 10 |
| 4 | HYDROPSYCHE SP.B | 10 |
| 5 | SYMPHITOPS SP. A | 10 |
| 6 | RHEOTANYTARSUS | 10 |
| 7 | CARDIOCLADIUS SP | 10 |

DIVERSITY INDEX 2.52

SAMPLE: 18/7

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 9.1 |
| 2 | NIXE SIMPLICIOID | 9.1 |
| 3 | TRICORYTHODES MI | 18.2 |
| 4 | MICROTENDIPES SP | 45.5 |
| 5 | PSECTROCLADIUS B | 9.1 |
| 6 | OLIGOCHAETA | 9.1 |

DIVERSITY INDEX 2.22

SAMPLE: 20/7

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CENTROPTILU SP. | 3.4 |
| 2 | NIXE SIMPLICIOID | 3.4 |
| 3 | MICROTENDIPES SP | 37.9 |
| 4 | PHAENOPSECTRA SP | 6.9 |
| 5 | POLYPEDILUM SP.A | 3.4 |
| 6 | MONODIAMESA SP. | 6.9 |
| 7 | ODONTOMESA SP. | 3.4 |
| 8 | OLIGOCHAETA | 34.5 |



DIVERSITY INDEX [illegible]

Table 17. Continued

SAMPLE: 20.5/7
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | NIXE SIMPLICIOID | 1.2 |
| 2 | PARACLADOPE SP.B | 2.4 |
| 3 | PHAENOPSECTRA SP | 3.7 |
| 4 | POLYPEDILUM SP.A | 1.2 |
| 5 | MONODIAMESA SP. | 9.8 |
| 6 | ODONTOMESA SP. | 1.2 |
| 7 | EUKIEFFERIELLA F | 4.9 |
| 8 | OLIGOCHAETA | 75.6 |

DIVERSITY INDEX 1.38

SAMPLE: S34-21
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | NIXE SIMPLICIOID | 1.7 |
| 2 | CRYPTOCHIRONOMUS | 3.4 |
| 3 | MICROTENDIPES SP | 32.2 |
| 4 | PARACLADOPE SP.B | 10.2 |
| 5 | POLYPEDILUM SP.A | 18.6 |
| 6 | RHEOTANYTARSUS | 1.7 |
| 7 | CORYNONEURA SP. | 3.4 |
| 8 | ORTHOCLADIUS NIG | 1.7 |
| 9 | ORTHOCLADIUS OBU | 1.7 |
| 10 | PSECTROCLADIUS B | 3.4 |
| 11 | SYNORTHOCLADIUS | 1.7 |
| 12 | OLIGOCHAETA | 20.3 |

DIVERSITY INDEX 2.73

SAMPLE: 21.5/7
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | NIXE SIMPLICIOID | 2.4 |
| 2 | TRICORYTHODES MI | 2.4 |
| 3 | CRYPTOCHIRONOMUS | 4.9 |
| 4 | MICROTENDIPES SP | 17.1 |
| 5 | POLYPEDILUM SP.A | 2.4 |
| 6 | RHEOTANYTARSUS | 2.4 |
| 7 | OLIGOCHAETA | 68.3 |

DIVERSITY INDEX 1.55

SAMPLE: 22/7
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CENTROPTILU SP.A | 7.7 |
| 2 | ATTENELLA MARGAR | 7.7 |
| 3 | NIXE SIMPLICIOID | 15.4 |
| 4 | NEOTRICHIA SP. | 15.4 |
| 5 | RHEOTANYTARSUS | 53.8 |

DIVERSITY INDEX 1.38

Table 17. Continued

SAMPLE: S84-26
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | | PERCENTAGE |
|---|---|---|---|
| 1 | EPEORUS ALBERTAE | | .1 |
| 2 | SYMPHITOPS COCKE | | .1 |
| 3 | OPTIOSERVUS SPP. | | .1 |
| 4 | CHIRONOMUS SP. | 1.6 | |
| 5 | CRYPTOCHIRONOMUS | | .1 |
| 6 | CRYPTOTENDIPE SP | | 1 |
| 7 | MICROPSECTR SP.B | | .1 |
| 8 | PARALAUTERBORNIE | | 8 |
| 9 | PARATANYTARSUS | | .1 |
| 10 | PHAENOPSECTRA SP | | 6 |
| 11 | POLYPEDILUM SP.C | | 30.6 |
| 12 | STEMPELLINELLA | | .3 |
| 13 | TANYTARSUS SP. A | | .6 |
| 14 | MONODIAMESA SP. | | .3 |
| 15 | ORTHOCLADIUS OBU | | .1 |
| 16 | PSECTROCLADIUS A | | .1 |
| 17 | PROCLADIUS SP. A | | 1.7 |
| 18 | OLIGOCHAETA | | 49.4 |

DIVERSITY INDEX 1.97

SAMPLE: S84-28A
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | | PERCENTAGE |
|---|---|---|---|
| 1 | CHIRONOMUS SP. | 3.1 | |
| 2 | CRYPTOTENDIPE SP | | .6 |
| 3 | PROCLADIUS SP. A | | 22 |
| 4 | OLIGOCHAETA | | 74 |

DIVERSITY INDEX 1.01

SAMPLE: S84-28B
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | | PERCENTAGE |
|---|---|---|---|
| 1 | PALPOMY-GP SP. A | | .2 |
| 2 | CHIRONOMUS SP. | 4.2 | |
| 3 | CRYPTOTENDIPE SP | | .5 |
| 4 | HARNISCHIA SP. | | 3 |
| 5 | TANYTARSUS SP. A | | 1.2 |
| 6 | PROCLADIUS SP. A | | 7.9 |
| 7 | PROCLADIUS SP. B | | .7 |
| 8 | OSTRACODA | | .5 |
| 9 | UNIONICOLA SP. | | .2 |
| 10 | OLIGOCHAETA | | 81.4 |

DIVERSITY INDEX 1.12

Table 17. Continued

SAMPLE: S84-30
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | PALPOMY-GP SP. A | 2.4 |
| 2 | CLADOTANYTA SP.A | 12.2 |
| 3 | CRYPTOTENDIPE SP | 12.2 |
| 4 | HARNISCHIA SP. | 7.3 |
| 5 | LENZIELLA SP. | 4.9 |
| 6 | MICROPSECTR SP.B | 4.9 |
| 7 | PAGASTIELLA SP. | 22 |
| 8 | PARATANYTARSUS | 4.9 |
| 9 | POLYPEDILUM SP.D | 4.9 |
| 10 | STEMPELLINA SP. | 4.9 |
| 11 | HETEROTRISSOCLAD | 4.9 |
| 12 | PROCLADIUS SP. A | 4.9 |
| 13 | CLADOCERA | 2.4 |
| 14 | HYALELLA AZTECA | 2.4 |
| 15 | LYMNAEA SP. | 2.4 |
| 16 | OLIGOCHAETA | 2.4 |

DIVERSITY INDEX 3.64

Table 17. Benthic Macroinvertebrate Sample Percentage Distribution and Diversity Data, Fall 1984

Shallow Water Monitoring Stations - Kick Samples

SAMPLE: F84-01

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .4 |
| 2 | BAETIS TRICAUDAT | 1.8 |
| 3 | DRUNELLA GRANDIS | .1 |
| 4 | EPHEMERELLA INFR | 57.5 |
| 5 | CINYGMULA SP. | .1 |
| 6 | EPEORUS ALBERTAE | .1 |
| 7 | RHITHROGENA HAGE | 6.1 |
| 8 | PARALEPTOPHL MEM | .4 |
| 9 | AMELETUS VELOX | .1 |
| 10 | CAPNIA-GROUP SP. | 0 |
| 11 | ALLOPERLA-GROUP | .2 |
| 12 | PROSTOIA BESAMET | .1 |
| 13 | ZAPADA CINCTIPES | .2 |
| 14 | CLAASSENI SABULO | .4 |
| 15 | HESPEROPERLA PAC | 0 |
| 16 | CULTUS PILATUS | 0 |
| 17 | ISOGENOIDES ELON | .3 |
| 18 | ISOPERLA FULVA | 2.5 |
| 19 | ISOPERLA QUINQUE | .3 |
| 20 | SKWALA PARALLELA | .1 |
| 21 | PTERONARCELLA BA | 1 |
| 22 | PTERONARCYS CALI | 0 |
| 23 | TAENIONEMA PACIF | .2 |
| 24 | BRACHYCENTRUS OC | 0 |
| 25 | ARCTOPSYCHE GRAN | .8 |
| 26 | CHEUMATOPSYCHE | .6 |
| 27 | HYDROPSYCHE OCCI | 19 |
| 28 | SYMPHITOPS COCKE | .5 |
| 29 | SYMPHITOPS SLOSS | 1.7 |
| 30 | HYDROPTILA SP. | .2 |
| 31 | LEPIDOSTOMA SP.A | .7 |
| 32 | CERACLEA SP. | 0 |
| 33 | OECETIS SP. A | .1 |
| 34 | OPTIOSERVUS SPP. | .7 |
| 35 | ZAITZEVIA PARVUL | .7 |
| 36 | ATHERIX VARIEGAT | .1 |
| 37 | MICROPSECTR SP.A | 0 |
| 38 | MICROTENDIPES SP | 0 |
| 39 | POLYPEDILUM SP.A | 0 |
| 40 | DIAMESA SP. B | .1 |
| 41 | CRICOTOPUS SP. B | .3 |
| 42 | EUKIEFFERIELLA B | .9 |
| 43 | EUKIEFFERIELLA E | .2 |
| 44 | EUKIEFFERIELLA H | .1 |
| 45 | ORTHOCLADIUS B | .1 |
| 46 | ORTHOCLADIUS OBU | .2 |
| 47 | SIMULIUM SP. | .4 |
| 48 | HEXATOMA SP. | .6 |

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Table 17. Continued

SAMPLE: F84-02

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .9 |
| 2 | BAETIS TRICAUDAT | 3.2 |
| 3 | DRUNELLA DODDSI | .1 |
| 4 | DRUNELLA GRANDIS | .1 |
| 5 | EPHEMERELLA INFR | [illegible] |
| 6 | EPEORUS ALBERTAE | [illegible] |
| 7 | HEPTAGENIA SOLIT | [illegible] |
| 8 | RHITHROGENA HAGE | [illegible] |
| 9 | PARALEPTOPHL MEN | 2.5 |
| 10 | AMELETUS VELOX | .1 |
| 11 | CAPNIA-GROUP SP. | .3 |
| 12 | ALLOPERLA-GROUP | 2.2 |
| 13 | ZAPADA CINCTIPES | .3 |
| 14 | CALINEURIA CALIF | 1.3 |
| 15 | CLAASSENI SABULO | 3 |
| 16 | HESPEROPERLA PAC | .2 |
| 17 | CULTUS PILATUS | .1 |
| 18 | ISOPERLA FULVA | 1.1 |
| 19 | ISOPERLA QUINQUE | 0 |
| 20 | SKWALA PARALLELA | .2 |
| 21 | PTERONARCYS CALI | .3 |
| 22 | HELICOPSYCHE BOR | .4 |
| 23 | ARCTOPSYCHE GRAN | .2 |
| 24 | CHEUMATOPSYCHE | 6.7 |
| 25 | HYDROPSYCHE OCCI | 2 |
| 26 | SYMPHITOPS COCKE | 1.4 |
| 27 | SYMPHITOPS SLOSS | 12.7 |
| 28 | HYDROPTILA SP. | 2.9 |
| 29 | LEUCOTRICHIA PIC | .1 |
| 30 | LEPIDOSTOMA SP.A | .8 |
| 31 | OECETIS SP. A | .1 |
| 32 | APATANIA SP. | 0 |
| 33 | PSYCHOMYIA FLAVI | .5 |
| 34 | RHYACOPHILA BIFI | .3 |
| 35 | PARARGYRACTIS SP | .1 |
| 36 | OREODYTES SCITIL | 0 |
| 37 | OPTIOSERVUS SPP. | 2.4 |
| 38 | ZAITZEVIA PARVUL | 2.8 |
| 39 | ATHERIX VARIEGAT | 0 |
| 40 | MICROTENDIPES SP | .3 |
| 41 | POLYPEDILUM SP.A | .1 |
| 42 | POLYPEDILUM SP.C | 0 |
| 43 | RHEOTANYTARSUS | .6 |
| 44 | TANYTARSUS SP. B | 0 |
| 45 | POTTHASTIA SP. | .1 |
| 46 | CRICOTOPUS SP. B | 2.1 |
| 47 | EUKIEFFERIELLA B | [illegible] |
| 48 | EUKIEFFERIELLA E | 0 |
| 49 | EUKIEFFERIELLA H | .5 |
| 50 | ORTHOCLADIUS [illegible] | .7 |
| 51 | ORTHOCLADIUS OBU | .7 |
| 52 | THIENEMANIELL SP | 0 |

Table 17. Continued

| | | |
|---|---|---|
| 53 | ABLABESMYIA SP. | .1 |
| 54 | WIEDEMANNIA SP. | .1 |
| 55 | SIMULIUM SP. | .1 |
| 56 | ANTOCHA SP. | .1 |
| 57 | HEXATOMA SP. | 1.4 |
| 58 | SPERCHON SP. | .1 |
| 59 | PHYSA SP. | .6 |
| 60 | OLIGOCHAETA | 0 |
| 61 | OLIGOCHAETA LUMB | .3 |
| 62 | TURBELLARI | .1 |

DIVERSITY INDEX 3.93

Table 17. Continued

SAMPLE: F34-04

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .1 |
| 2 | BAETIS TRICAUDAT | 1.6 |
| 3 | DRUNELLA DODDSI | .1 |
| 4 | DRUNELLA GRANDIS | .5 |
| 5 | EPHEMERELLA INFR | 17.2 |
| 6 | RHITHROGENA HAGE | 1.2 |
| 7 | PARALEPTOPHL MEM | .3 |
| 8 | AMELETUS VELOX | .1 |
| 9 | CAPNIA-GROUP SP. | .3 |
| 10 | ALLOPERLA-GROUP | .1 |
| 11 | ZAPADA CINCTIPES | .2 |
| 12 | CLAASSENI SABULO | .3 |
| 13 | HESPEROPERLA PAC | [illegible] |
| 14 | ISOGENOIDES ELON | .5 |
| 15 | ISOPERLA FULVA | 3.1 |
| 16 | ISOPERLA QUINQUE | .1 |
| 17 | SKWALA PARALLELA | .1 |
| 18 | PTERONARCELLA BA | .5 |
| 19 | PTERONARCYS CALI | .4 |
| 20 | TAENIONEMA PACIF | .6 |
| 21 | BRACHYCENTRUS OC | .1 |
| 22 | ARCTOPSYCHE GRAN | .8 |
| 23 | CHEUMATOPSYCHE | 14.9 |
| 24 | HYDROPSYCHE OCCI | 28.9 |
| 25 | SYMPHITOPS COCKE | 7.7 |
| 26 | SYMPHITOPS SLOSS | [illegible].3 |
| 27 | HYDROPTILA SP. | 5.4 |
| 28 | LEPIDOSTOMA SP.A | .1 |
| 29 | PSYCHOMYIA FLAVI | 1.1 |
| 30 | RHYACOPHILA BIFI | .3 |
| 31 | PARARGYRACTIS SP | .4 |
| 32 | OPTIOSERVUS SPP. | 1.1 |
| 33 | ZAITZEVIA PARVUL | 1.6 |
| 34 | MICROTENDIPES SP | 2 |
| 35 | POLYPEDILUM SP.A | .2 |
| 36 | RHEOTANYTARSUS | .1 |
| 37 | CRICOTOPUS SP. B | .3 |
| 38 | EUKIEFFERIELLA B | 1.7 |
| 39 | EUKIEFFERIELLA E | .3 |
| 40 | EUKIEFFERIELLA H | .3 |
| 41 | ORTHOCLADIUS B | .2 |
| 42 | ORTHOCLADIUS OBU | .3 |
| 43 | ABLABESMYIA SP. | .2 |
| 44 | WIEDEMANNIA SP. | .1 |
| 45 | SIMULIUM SP. | .3 |
| 46 | ANTOCHA SP. | .1 |
| 47 | OLIGOCHAETA LUM | .1 |

DIVERSITY INDEX 3.54

Table 17. Continued

SAMPLE: F84-05
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 1.2 |
| 2 | BAETIS TRICAUDAT | .8 |
| 3 | DRUNELLA GRANDIS | .1 |
| 4 | EPHEMERELLA INFR | 31.9 |
| 5 | CINYGMULA SP. | .1 |
| 6 | HEPTAGENIA SOLIT | .1 |
| 7 | RHITHROGENA HAGE | 4.1 |
| 8 | PARALEPTOPHL MEM | .6 |
| 9 | AMELETUS VELOX | .4 |
| 10 | CAPNIA-GROUP SP. | .6 |
| 11 | ALLOPERLA-GROUP | .2 |
| 12 | ZAPADA CINCTIPES | .1 |
| 13 | CLAASSENI SABULO | .2 |
| 14 | HESPEROPERLA PAC | .3 |
| 15 | CULTUS PILATUS | .1 |
| 16 | ISOGENOIDES ELON | .6 |
| 17 | ISOPERLA FULVA | 4.5 |
| 18 | ISOPERLA QUINQUE | .2 |
| 19 | SKWALA PARALLELA | .2 |
| 20 | PTERONARCELLA BA | .2 |
| 21 | PTERONARCYS CALI | .2 |
| 22 | TAENIONEMA PACIF | .1 |
| 23 | ARCTOPSYCHE GRAN | 1.2 |
| 24 | CHEUMATOPSYCHE | 9 |
| 25 | HYDROPSYCHE OCCI | 23.7 |
| 26 | SYMPHITOPS COCKE | 8.9 |
| 27 | SYMPHITOPS SLOSS | 1.6 |
| 28 | HYDROPTILA SP. | .8 |
| 29 | LEPIDOSTOMA SP.A | .1 |
| 30 | OECETIS SP. A | .2 |
| 31 | PSYCHOMYIA FLAVI | .4 |
| 32 | RHYACOPHILA BIFI | .2 |
| 33 | OPTIOSERVUS SPP. | .6 |
| 34 | ZAITZEVIA PARVUL | .7 |
| 35 | MICROTENDIPES SP | .1 |
| 36 | POLYPEDILUM SP.A | .1 |
| 37 | CRICOTOPUS SP. B | 1.4 |
| 38 | EUKIEFFERIELLA B | 2.3 |
| 39 | EUKIEFFERIELLA E | .1 |
| 40 | EUKIEFFERIELLA H | .2 |
| 41 | HETEROTRISSOCLAD | .1 |
| 42 | ORTHOCLADIUS B | .7 |
| 43 | ORTHOCLADIUS OBU | .4 |
| 44 | ABLABESMYIA SP. | .1 |
| 45 | WIEDEMANNIA SP. | .3 |
| 46 | SIMULIUM SP. | .1 |
| 47 | ANTOCHA SP. | .1 |
| 48 | HEXATOMA SP. | .9 |

DIVERSITY INDEX 3.31

Table 17. Continued

SAMPLE: F84-06

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .9 |
| 2 | BAETIS TRICAUDAT | 1.1 |
| 3 | DRUNELLA GRANDIS | .2 |
| 4 | EPHEMERELLA INFR | 45.2 |
| 5 | CINYGMULA SP. | .1 |
| 6 | HEPTAGENIA SOLIT | 1.9 |
| 7 | RHITHROGENA HAGE | 3.3 |
| 8 | PARALEPTOPHL MEM | [illegible] |
| 9 | AMELETUS VELOX | .1 |
| 10 | ALLOPERLA-GROUP | .1 |
| 11 | CLAASSENI SABULO | .1 |
| 12 | HESPEROPERLA PAC | .1 |
| 13 | CULTUS PILATUS | 1 |
| 14 | ISOGENOIDES ELON | .5 |
| 15 | ISOPERLA FULVA | 1.6 |
| 16 | ISOPERLA QUINQUE | .2 |
| 17 | SKWALA PARALLELA | .1 |
| 18 | PTERONARCELLA BA | .3 |
| 19 | PTERONARCYS CALI | .1 |
| 20 | OPHIOGOMPHUS SP. | .1 |
| 21 | BRACHYCENTRUS AM | .1 |
| 22 | BRACHYCENTRUS OC | .1 |
| 23 | ARCTOPSYCHE GRAN | [illegible] |
| 24 | CHEUMATOPSYCHE | 15.7 |
| 25 | HYDROPSYCHE OCCI | 7.5 |
| 26 | SYMPHITOPS COCKE | 3 |
| 27 | HYDROPTILA SP. | 1.7 |
| 28 | ZUMATRICHIA NOTO | .1 |
| 29 | LEPIDOSTOMA SP.A | .1 |
| 30 | CERACLEA SP. | .1 |
| 31 | OECETIS SP. A | 4.5 |
| 32 | PSYCHOMYIA FLAVI | 3 |
| 33 | RHYACOPHILA BIFI | .1 |
| 34 | PARARGYRACTIS SP | .2 |
| 35 | OREODYTES SCITIL | .1 |
| 36 | OPTIOSERVUS SPP. | .5 |
| 37 | ZAITZEVIA PARVUL | 1.6 |
| 38 | ATHERIX VARIEGAT | .2 |
| 39 | CRYPTOCHIRONOMUS | .1 |
| 40 | MICROTENDIPES SP | 2.2 |
| 41 | POLYPEDILUM SP.A | .1 |
| 42 | CRICOTOPUS SP. B | .2 |
| 43 | EUKIEFFERIELLA B | .1 |
| 44 | EUKIEFFERIELLA E | .1 |
| 45 | EUKIEFFERIELLA H | .2 |
| 46 | ORTHOCLADIUS B | .3 |
| 47 | ORTHOCLADIUS OBU | 1.1 |
| 48 | SYNORTHOCLADIUS | .1 |
| 49 | THIENEMANIELL SP | .1 |
| 50 | ABLABESMYIA SP. | .3 |
| 51 | CHELIFERA SP. | .1 |
| 52 | WIEDEMANNIA SP. | .1 |
| 53 | SIMULIUM SP. | .1 |
| 54 | ANTOCHA SP. | .1 |
| 55 | HEXATOMA SP. | .4 |

DIVERSITY INDEX 3.13

Table 17. Continued

SAMPLE: F04-06

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .4 |
| 2 | BAETIS TRICAUDAT | .3 |
| 3 | DRUNELLA GRANDIS | .2 |
| 4 | EPHEMERELLA INFR | 35.9 |
| 5 | RHITHROGENA HAGE | .5 |
| 6 | AMELETUS VELOX | .1 |
| 7 | TRICORYTHODES MI | .1 |
| 8 | CAPNIA-GROUP SP. | .6 |
| 9 | ALLOPERLA-GROUP | .1 |
| 10 | ZAPADA CINCTIPES | .3 |
| 11 | HESPEROPERLA PAC | .2 |
| 12 | ISOGENOIDES ELON | .2 |
| 13 | ISOPERLA FULVA | .2 |
| 14 | PTERONARCELLA BA | .3 |
| 15 | PTERONARCYS CALI | .3 |
| 16 | ARCTOPSYCHE GRAN | .6 |
| 17 | CHEUMATOPSYCHE | 7.2 |
| 18 | HYDROPSYCHE OCCI | 15.4 |
| 19 | SYMPHITOPS COCKE | 6.2 |
| 20 | HYDROPTILA SP. | 4.6 |
| 21 | LEPIDOSTOMA SP.A | .2 |
| 22 | OECETIS SP. A | .5 |
| 23 | PSYCHOMYIA FLAVI | 1.9 |
| 24 | PARARGYRACTIS SP | .9 |
| 25 | OPTIOSERVUS SPP. | .9 |
| 26 | ZAITZEVIA PARVUL | .3 |
| 27 | CHIRONOMUS SP. | 1.1 |
| 28 | DICROTENDIP SP.C | .1 |
| 29 | MICROTENDIPES SP | 5.3 |
| 30 | PHAENOPSECTRA SP | .9 |
| 31 | POLYPEDILUM SP.A | 1 |
| 32 | TANYTARSUS SP. B | 5.1 |
| 33 | DIAMESA SP. B | .3 |
| 34 | POTTHASTIA SP. | .1 |
| 35 | CRICOTOPUS SP. B | 3.1 |
| 36 | EUKIEFFERIELLA B | .9 |
| 37 | EUKIEFFERIELLA E | .2 |
| 38 | EUKIEFFERIELLA H | .7 |
| 39 | ORTHOCLADIUS B | .5 |
| 40 | ORTHOCLADIUS NIG | .1 |
| 41 | ORTHOCLADIUS OBU | 1.2 |
| 42 | ABLABESMYIA SP. | .2 |
| 43 | WIEDEMANNIA SP. | .2 |
| 44 | EPHYDRIDAE | .1 |
| 45 | OLIGOCHAETA | .5 |
| 46 | OLIGOCHAETA LUMB | [illegible] |

DIVERSITY INDEX [illegible]

Table 17. Continued

SAMPLE: F84-09

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .7 |
| 2 | BAETIS TRICAUDAT | .6 |
| 3 | EPHEMERELLA INFR | 35.5 |
| 4 | HEPTAGENIA SOLIT | .7 |
| 5 | RHITHROGENA HAGE | 4.9 |
| 6 | PARALEPTOPHL HEH | .6 |
| 7 | AMELETUS VELOX | .5 |
| 8 | CAPNIA-GROUP SP. | .5 |
| 9 | CLAASSENI SABULO | .1 |
| 10 | HESPEROPERLA PAC | .2 |
| 11 | ISOGENOIDES ELON | .4 |
| 12 | ISOPERLA FULVA | 1.5 |
| 13 | ISOPERLA QUINQUE | .1 |
| 14 | SKWALA PARALLELA | .2 |
| 15 | PTERONARCELLA BA | .1 |
| 16 | PTERONARCYS CALI | .1 |
| 17 | ARCTOPSYCHE GRAN | .2 |
| 18 | CHEUMATOPSYCHE | 14.6 |
| 19 | HYDROPSYCHE OCCI | 10.2 |
| 20 | SYMPHITOPS COCKE | 2.5 |
| 21 | HYDROPTILA SP. | 8.1 |
| 22 | LEPIDOSTOMA SP.A | .1 |
| 23 | OECETIS SP. A | [illegible] |
| 24 | PSYCHOMYIA FLAVI | 3.2 |
| 25 | PARARGYRACTIS SP | .1 |
| 26 | OPTIOSERVUS SPP. | .3 |
| 27 | ZAITZEVIA PARVUL | .8 |
| 28 | MICROTENDIPES SP | 2.2 |
| 29 | PHAENOPSECTRA SP | 1.1 |
| 30 | TANYTARSUS SP. B | 2.3 |
| 31 | CRICOTOPUS SP. B | .5 |
| 32 | EUKIEFFERIELLA B | .6 |
| 33 | EUKIEFFERIELLA H | .1 |
| 34 | ORTHOCLADIUS B | .3 |
| 35 | ORTHOCLADIUS OBU | 4.4 |
| 36 | SYNORTHOCLADIUS | .1 |
| 37 | CHELIFERA SP. | .1 |
| 38 | WIEDEMANNIA SP. | .1 |
| 39 | HEXATOMA SP. | .1 |
| 40 | OLIGOCHAETA | .1 |

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Table 17. Continued

SAMPLE: F84-10

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .8 |
| 2 | BAETIS TRICAUDAT | 1.9 |
| 3 | CENTROPTILU SP.A | 0 |
| 4 | DRUNELLA GRANDIS | .2 |
| 5 | EPHEMERELLA INFR | 12.8 |
| 6 | CINYGMULA SP. | 0 |
| 7 | HEPTAGENIA SOLIT | .5 |
| 8 | RHITHROGENA HAGE | 3.3 |
| 9 | PARALEPTOPHL HEM | .7 |
| 10 | AMELETUS VELOX | .3 |
| 11 | CLAASSENI SABULO | 1 |
| 12 | HESPEROPERLA PAC | 0 |
| 13 | CULTUS PILATUS | 0 |
| 14 | ISOGENOIDES ELON | 0 |
| 15 | ISOPERLA FULVA | 1.3 |
| 16 | SKWALA PARALLELA | .2 |
| 17 | PTERONARCELLA BA | .9 |
| 18 | TAENTONEMA PACIF | .2 |
| 19 | BRACHYCENTRUS OC | 1 1 |
| 20 | PROTOPTILA SP. | 0 |
| 21 | ARCTOPSYCHE GRAN | 1.1 |
| 22 | CHEUMATOPSYCHE | 14.4 |
| 23 | HYDROPSYCHE OCCI | 16.8 |
| 24 | SYMPHITOPS COCKE | 4.6 |
| 25 | SYMPHITOPS SLOSS | .2 |
| 26 | HYDROPTILA SP. | 13.7 |
| 27 | LEUCOTRICHIA PIC | 0 |
| 28 | LEPIDOSTOMA SP.A | 0 |
| 29 | OECETIS SP. A | .1 |
| 30 | PSYCHOMYIA FLAVI | .6 |
| 31 | PARARGYRACTIS SP | 1.1 |
| 32 | OPTIOSERVUS SPP. | 9 |
| 33 | ZAITZEVIA PARVUL | 2.9 |
| 34 | ATHERIX VARIEGAT | .1 |
| 35 | MICROPSECTR SP.A | .8 |
| 36 | MICROTENDIPES SP | .1 |
| 37 | POLYPEDILUM SP.A | .1 |
| 38 | TANYTARSUS SP. B | .2 |
|  | PAGASTIA SP. | 0 |
| 40 | CRICOTOPUS SP. B | .9 |
| 41 | EUKIEFFERIELLA B | 3.9 |
| 42 | EUKIEFFERIELLA E | .1 |
| 43 | EUKIEFFERIELLA H | .1 |
| 44 | HETEROTRISSOCLAD | .1 |
| 45 | ORTHOCLADIUS B | .1 |
| 46 | ORTHOCLADIUS OBU | .3 |
| 47 | THIENEMANIELL SP | .1 |
| 48 | ABLABESMYIA SP. | 0 |
| 49 | CHELIFERA SP. | .2 |
| 50 | WIEDEMANNIA SP. | .2 |
| 51 | SIMULIUM SP. | 1.4 |
| 52 | ANTOCHA SP. | .6 |
| 53 | OLIGOCHAETA LUMB | .3 |
| 54 | HIRUDINEA | 0 |

DIVERSITY INDEX 3.94

Table 17. Continued

SAMPLE: F64-11

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .7 |
| 2 | BAETIS TRICAUDAT | .7 |
| 3 | EPHEMERELLA INFR | 31.4 |
| 4 | HEPTAGENIA SOLIT | .2 |
| 5 | RHITHROGENA HAGE | 3.9 |
| 6 | PARALEPTOPHL HEM | .4 |
| 7 | AMELETUS VELOX | .6 |
| 8 | ZAPADA CINCTIPES | 0 |
| 9 | CLAASSENI SABULO | .2 |
| 10 | HESPEROPERLA PAC | 0 |
| 11 | ISOGENOIDES ELON | .4 |
| 12 | ISOPERLA FULVA | 1 |
| 13 | ISOPERLA QUINQUE | .1 |
| 14 | SKWALA PARALLELA | .1 |
| 15 | PTERONARCELLA BA | .2 |
| 16 | PTERONARCYS CALI | 0 |
| 17 | TAENIONEMA PACIF | 0 |
| 18 | ARCTOPSYCHE GRAN | .6 |
| 19 | CHEUMATOPSYCHE | 3.3 |
| 20 | HYDROPSYCHE OCCI | 17.1 |
| 21 | SYMPHITOPS COCKE | .9 |
| 22 | SYMPHITOPS SLOSS | .2 |
| 23 | HYDROPTILA SP. | 22.1 |
| 24 | LEPIDOSTOMA SP.A | .2 |
| 25 | PSYCHOMYIA FLAVI | .1 |
| 26 | PARARGYRACTIS SP | 0 |
| 27 | OPTIOSERVUS SPP. | .7 |
| 28 | ZAITZEVIA PARVUL | .9 |
| 29 | ATHERIX VARIEGAT | 1.1 |
| 30 | MICROPSECTR SP.A | .5 |
| 31 | MICROTENDIPES SP | 3.7 |
| 32 | POLYPEDILUM SP.A | .1 |
| 33 | TANYTARSUS SP. B | .4 |
| 34 | DIAMESA SP. B | 0 |
| 35 | PAGASTIA SP. | 0 |
| 36 | CRICOTOPUS SP. B | 2.8 |
| 37 | EUKIEFFERIELLA B | .6 |
| 38 | EUKIEFFERIELLA E | .4 |
| 39 | EUKIEFFERIELLA H | .1 |
| 40 | ORTHOCLADIUS B | .4 |
| 41 | ORTHOCLADIUS OBU | 3.5 |
| 42 | ABLABESMYIA SP. | 0 |
| 43 | WIEDEMANNIA SP. | .2 |
| 44 | HEXATOMA SP. | .4 |
| 45 | OLIGOCHAETA | .1 |

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Table 17. Continued

SAMPLE: F84-13

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .2 |
| 2 | BAETIS TRICAUDAT | .1 |
| 3 | EPHEMERELLA INFR | 9.2 |
| 4 | HEPTAGENIA SOLIT | .2 |
| 5 | RHITHROGENA HAGE | .7 |
| 6 | STENONEMA SP. | 0 |
| 7 | PARALEPTOPHL MEM | .2 |
| 8 | AMELETUS VELOX | .5 |
| 9 | CAPNIA-GROUP SP. | .1 |
| 10 | PROSTOIA BESAMET | 0 |
| 11 | CULTUS PILATUS | 0 |
| 12 | ISOGENOIDES ELON | .5 |
| 13 | ISOPERLA FULVA | .2 |
| 14 | SKWALA PARALLELA | .1 |
| 15 | PTERONARCELLA BA | .1 |
| 16 | ARCTOPSYCHE GRAN | .1 |
| 17 | CHEUMATOPSYCHE | 2.8 |
| 18 | HYDROPSYCHE OCCI | 2 |
| 19 | SYMPHITOPS COCKE | .1 |
| 20 | HYDROPTILA SP. | 49.8 |
| 21 | ZUMATRICHIA NOTO | 0 |
| 22 | OECETIS SP. A | .4 |
| 23 | PSYCHOMYIA FLAVI | .2 |
| 24 | PARARGYRACTIS SP | 0 |
| 25 | OPTIOSERVUS SPP. | .2 |
| 26 | ZAITZEVIA PARVUL | .4 |
| 27 | ATHERIX VARIEGAT | 0 |
| 28 | CRYPTOCHIRONOMUS | 0 |
| 29 | MICROPSECTR SP.A | .3 |
| 30 | MICROTENDIPES SP | 23.7 |
| 31 | PHAENOPSECTRA SP | .5 |
| 32 | TANYTARSUS SP. B | .5 |
| 33 | DIAMESA SP. B | .6 |
| 34 | DIAMESA SP. C | .1 |
| 35 | CRICOTOPUS SP. B | 1.5 |
| 36 | EUKIEFFERIELLA B | .1 |
| 37 | ORTHOCLADIUS B | .2 |
| 38 | ORTHOCLADIUS OBU | 2.4 |
| 39 | THIENEMANIELL SP | 0 |
| 40 | ABLABESMYIA SP. | .1 |
| 41 | CHELIFERA SP. | 0 |
| 42 | HEXATOMA SP. | .1 |
| 43 | TIPULA SP. | 0 |
| 44 | OLIGOCHAETA | 1.2 |
| 45 | OLIGOCHAETA LUMB | 0 |

DIVERSITY INDEX 2.49

Table 17. Continued

SAMPLE: F84-14

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .4 |
| 2 | BAETIS TRICAUDAT | .3 |
| 3 | CAENIS SIMULANS | .1 |
| 4 | EPHEMERELLA INFR | 19 |
| 5 | HEPTAGENIA SOLIT | .7 |
| 6 | RHITHROGENA HAGE | 1 |
| 7 | PARALEPTOPHL MEM | .5 |
| 8 | AMELETUS VELOX | .1 |
| 9 | CLAASSENI SABULO | .1 |
| 10 | ISOGENOIDES ELON | .1 |
| 11 | ISOPERLA FULVA | .6 |
| 12 | SKWALA PARALLELA | .1 |
| 13 | PTERONARCELLA BA | .1 |
| 14 | TAENIONEMA PACIF | .1 |
| 15 | ARCTOPSYCHE GRAN | .1 |
| 16 | CHEUMATOPSYCHE | 13.2 |
| 17 | HYDROPSYCHE OCCI | 12.[illegible] |
| 18 | SYMPHITOPS COCKE | .2 |
| 19 | HYDROPTILA SP. | 30.4 |
| 20 | CERACLEA SP. | .1 |
| 21 | OECETIS SP. A | .3 |
| 22 | OPTIOSERVUS SPP. | .3 |
| 23 | ZAITZEVIA PARVUL | [illegible] |
| 24 | ATHERIX VARIEGAT | [illegible] |
| 25 | MICROPSECTR SP.A | .6 |
| 26 | MICROTENDIPES SP | 10.9 |
| 27 | PARACLADOPE SP.A | .1 |
| 28 | PHAENOPSECTRA SP | .1 |
| 29 | TANYTARSUS SP. B | .2 |
| 30 | STICTOCHIRONO SP | .1 |
| 31 | CRICOTOPUS SP. B | 1.2 |
| 32 | EUKIEFFERIELLA B | .2 |
| 33 | EUKIEFFERIELLA E | .1 |
| 34 | EUKIEFFERIELLA H | .1 |
| 35 | HETEROTRISSOCLAD | .1 |
| 36 | ORTHOCLADIUS B | .2 |
| 37 | ORTHOCLADIUS OBU | 2.[illegible] |
| 38 | SYNORTHOCLADIUS | .1 |
| 39 | THIENEMANIELL SP | .1 |
| 40 | ABLABESMYIA SP. | .2 |
| 41 | WIEDEMANNIA SP. | .1 |
| 42 | SIMULIUM SP. | .1 |
| 43 | HEXATOMA SP. | .1 |
| 44 | HYALELLA AZTECA | .2 |
| 45 | GYRAULUS SP. | .1 |
| 46 | OLIGOCHAETA | 3 |
| 47 | OLIGOCHAETA LUMB | .1 |

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Table 17. Continued

SAMPLE: F84-15

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .6 |
| 2 | BAETIS TRICAUDAT | .4 |
| 3 | EPHEMERELLA INFR | 36.8 |
| 4 | HEPTAGENIA SOLIT | .3 |
| 5 | RHITHROGENA HAGE | 4.7 |
| 6 | PARALEPTOPHL MEM | .4 |
| 7 | AMELETUS VELOX | .8 |
| 8 | TRICORYTHODES MI | 0 |
| 9 | CAPNIA-GROUP SP. | .1 |
| 10 | CLAASSENI SABULO | .4 |
| 11 | CULTUS PILATUS | 0 |
| 12 | ISOGENOIDES ELON | .4 |
| 13 | ISOPERLA FULVA | .0 |
| 14 | ISOPERLA QUINQUE | 0 |
| 15 | SKWALA PARALLELA | .1 |
| 16 | PTERONARCELLA BA | .2 |
| 17 | TAENIONEMA PACIF | 0 |
| 18 | ARCTOPSYCHE GRAN | .1 |
| 19 | CHEUMATOPSYCHE | 5.5 |
| 20 | HYDROPSYCHE OCCI | 19.2 |
| 21 | SYMPHITOPS COCKE | .1 |
| 22 | HYDROPTILA SP. | 17.9 |
| 23 | OECETIS SP. A | .1 |
| 24 | OPTIOSERVUS SPP. | .9 |
| 25 | ZAITZEVIA PARVUL | .5 |
| 26 | ATHERIX VARIEGAT | .1 |
| 27 | CLADOTANYTA SP.A | 0 |
| 28 | MICROPSECTR SP.A | .2 |
| 29 | MICROTENDIPES SP | 4.6 |
| 30 | POLYPEDILUM SP.A | .1 |
| 31 | TANYTARSUS SP. B | .1 |
| 32 | DIAMESA SP. B | .1 |
| 33 | CRICOTOPUS SP. B | 2 |
| 34 | EUKIEFFERIELLA B | .2 |
| 35 | EUKIEFFERIELLA E | .1 |
| 36 | EUKIEFFERIELLA F | .1 |
| 37 | EUKIEFFERIELLA H | .2 |
| 38 | ORTHOCLADIUS B | .1 |
| 39 | ORTHOCLADIUS OBU | 1.2 |
| 40 | PSECTROCLADIUS B | 0 |
| 41 | ABLABESMYIA SP. | 0 |
| 42 | WIEDEMANNIA SP. | .1 |
| 43 | SIMULIUM SP. | .2 |
| 44 | HEXATOMA SP. | .1 |
| 45 | TIPULA SP. | 0 |
| 46 | OLIGOCHAETA | 0 |

DIVERSITY INDEX 2.93

Table 17. Continued

SAMPLE: F84-19

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .3 |
| 2 | BAETIS TRICAUDAT | 4.1 |
| 3 | DRUNELLA GR INGE | .2 |
| 4 | EPHEMERELLA INFR | 34.8 |
| 5 | CINYGMULA SP. | 0 |
| 6 | HEPTAGENIA SOLIT | 1.4 |
| 7 | RHITHROGENA HAGE | 1.3 |
| 8 | PARALEPTOPHL MEM | 1.9 |
| 9 | AMELETUS VELOX | .2 |
| 10 | ISOGENOIDES ELON | .6 |
| 11 | ISOPERLA FULVA | .6 |
| 12 | SKWALA PARALLELA | .1 |
| 13 | TAENIONEMA PACIF | 0 |
| 14 | BRACHYCENTRUS OC | .1 |
| 15 | ARCTOPSYCHE GRAN | .2 |
| 16 | CHEUMATOPSYCHE | 11.3 |
| 17 | HYDROPSYCHE OCCI | 12.5 |
| 18 | SYMPHITOPS COCKE | 2.4 |
| 19 | SYMPHITOPS SLOSS | .1 |
| 20 | HYDROPTILA SP. | 15.6 |
| 21 | LEUCOTRICHIA PIC | .1 |
| 22 | ZUMATRICHIA NOTO | 0 |
| 23 | OECETIS SP. A | .2 |
| 24 | PSYCHOMYIA FLAVI | 3.7 |
| 25 | PARARGYRACTIS SP | 0 |
| 26 | OPTIOSERVUS SPP. | .5 |
| 27 | ZAITZEVIA PARVUL | .5 |
| 28 | MICROPSECTR SP.A | .1 |
| 29 | MICROTENDIPES SP | 3.3 |
| 30 | POLYPEDILUM SP.A | .2 |
| 31 | CRICOTOPUS SP. B | .6 |
| 32 | EUKIEFFERIELLA B | .4 |
| 33 | EUKIEFFERIELLA E | 0 |
| 34 | EUKIEFFERIELLA F | .2 |
| 35 | EUKIEFFERIELLA H | .2 |
| 36 | ORTHOCLADIUS B | .3 |
| 37 | ORTHOCLADIUS OBU | 1.2 |
| 38 | SYNORTHOCLADIUS | 0 |
| 39 | OLIGOCHAETA LUMB | 0 |

DIVERSITY INDEX 3.22

Table 17. Continued

SAMPLE: F84-21

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 0 |
| 2 | BAETIS TRICAUDAT | .2 |
| 3 | DRUNELLA DODDSI | 0 |
| 4 | DRUNELLA GR INGE | .2 |
| 5 | EPHEMERELLA INFR | 52 |
| 6 | CINYGMULA SP. | .2 |
| 7 | EPEORUS ALBERTAE | 0 |
| 8 | HEPTAGENIA SOLIT | .6 |
| 9 | RHITHROGENA HAGE | .5 |
| 10 | PARALEPTOPHL HEM | 1.2 |
| 11 | AMELETUS VELOX | .4 |
| 12 | CAPNIA-GROUP SP. | .1 |
| 13 | CLAASSENI SABULO | .4 |
| 14 | HESPEROPERLA PAC | .1 |
| 15 | ISOGENOIDES ELON | .4 |
| 16 | ISOPERLA FULVA | 1 |
| 17 | SKWALA PARALLELA | 0 |
| 18 | PTERONARCYS CALI | .1 |
| 19 | TAENIONEMA PACIF | .2 |
| 20 | BRACHYCENTRUS OC | .3 |
| 21 | ARCTOPSYCHE GRAN | .6 |
| 22 | CHEUMATOPSYCHE | 8.7 |
| 23 | HYDROPSYCHE OCCI | 6.2 |
| 24 | SYMPHITOPS COCKE | 2 |
| 25 | SYMPHITOPS SLOSS | .2 |
| 26 | HYDROPTILA SP. | 13.5 |
| 27 | LEPIDOSTOMA SP.A | .2 |
| 28 | CERACLEA SP. | .5 |
| 29 | OECETIS SP. A | .2 |
| 30 | PSYCHOMYIA FLAVI | 1.4 |
| 31 | OPTIOSERVUS SPP. | .6 |
| 32 | ZAITZEVIA PARVUL | 1 |
| 33 | MICROTENDIPES SP | 5.6 |
| 34 | PHAENOPSECTRA SP | 0 |
| 35 | POLYPEDILUM SP.A | 0 |
| 36 | CRICOTOPUS SP. B | 0 |
| 37 | EUKIEFFERIELLA E | 0 |
| 38 | EUKIEFFERIELLA F | 0 |
| 39 | ORTHOCLADIUS B | .2 |
| 40 | ORTHOCLADIUS OBU | .5 |
| 41 | ABLABESMYIA SP. | .1 |
| 42 | ANTOCHA SP. | 0 |
| 43 | OLIGOCHAETA LUMB | .3 |
| 44 | TURBELLARI | 0 |

DIVERSITY INDEX 2.7

SAMPLE: F84-23
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 1.8 |
| 2 | BAETIS TRICAUDAT | .3 |
| 3 | EPHEMERELLA INFR | .2 |
| 4 | RHITHROGENA HAGE | .2 |
| 5 | STENONEMA SP. | .3 |
| 6 | AESHNA SP. | .1 |
| 7 | CHEUMATOPSYCHE | .2 |
| 8 | HYDROPTILA SP. | 2.5 |
| 9 | OXYETHIRA SP. | .5 |
| 10 | CERACLEA SP. | .1 |
| 11 | TRIAENODES SP. | .1 |
| 12 | POLYCENTROPUS SP | .1 |
| 13 | PARARGYRACTIS SP | .5 |
| 14 | DUBIRAPHIA SP. | .4 |
| 15 | OPTIOSERVUS SPP. | .1 |
| 16 | ZAITZEVIA PARVUL | .2 |
| 17 | GYRINUS SP. | .4 |
| 18 | DICROTENDIP SP.A | 1.1 |
| 19 | MICROPSECTR SP.A | .2 |
| 20 | TANYTARSUS SP. B | [illegible] |
| 21 | DIAMESA SP. B | .1 |
| 22 | PAGASTIA SP. | 1.9 |
| 23 | POTTHASTIA SP. | .2 |
| 24 | CORYNONEURA SP. | .4 |
| 25 | CRICOTOPUS SP. B | 6 |
| 26 | EUKIEFFERIELLA F | 1.9 |
| 27 | ORTHOCLADIUS B | 6.5 |
| 28 | ORTHOCLADIUS OBU | 4.3 |
| 29 | PSECTROCLADIUS B | 14.9 |
| 30 | SYNORTHOCLADIUS | .3 |
| 31 | ABLABESMYIA SP. | .1 |
| 32 | WIEDEMANNIA SP. | .4 |
| 33 | SIMULIUM SP. | .9 |
| 34 | HYALELLA AZTECA | 5.6 |
| 35 | LEBERTIA SP. | .1 |
| 36 | GYRAULUS SP. | 8 |
| 37 | LYMNAEA SP. | .9 |
| 38 | PHYSA SP. | 3.9 |
| 39 | OLIGOCHAETA | 5.5 |
| 40 | OLIGOCHAETA LUMB | 1.5 |
| 41 | TURBELLARI | 26.4 |
| 42 | GLOSSIPHONIA SP | .2 |

DIVERSITY INDEX 3.82

Table 17. Continued

SAMPLE: FC1-24
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .6 |
| 2 | BAETIS TRICAUDAT | .1 |
| 3 | EPHEMERELLA INFR | .5 |
| 4 | HEPTAGENIA SOLIT | .9 |
| 5 | RHITHROGENA HAGE | 1.6 |
| 6 | STENONEMA SP. | 10.9 |
| 7 | AMELETUS VELOX | .1 |
| 8 | OPHIOGOMPHUS SP. | .1 |
| 9 | GLOSSOSOMA SP. | .1 |
| 10 | CHEUMATOPSYCHE | 7.1 |
| 11 | HYDROPSYCHE OCCI | 1 |
| 12 | SYMPHITOPS COCKE | 1.1 |
| 13 | HYDROPTILA SP. | .2 |
| 14 | CERACLEA SP. | 2.[illegible] |
| 15 | OECETIS SP. A | .2 |
| 16 | OPTIOSERVUS SPP. | .2 |
| 17 | ZAITZEVIA PARVUL | 1.2 |
| 18 | LENZIELLA SP. | .1 |
| 19 | MICROPSECTR SP.A | .2 |
| 20 | MICROTENDIPES SP | 6 |
| 21 | TANYTARSUS SP. B | .1 |
| 22 | DIAMESA SP. B | .4 |
| 23 | PAGASTIA SP. | .2 |
| 24 | CRICOTOPUS SP. B | 15 |
| 25 | EUKIEFFERIELLA F | 1 |
| 26 | EUKIEFFERIELLA H | .1 |
| 27 | ORTHOCLADIUS B | 2.9 |
| 28 | ORTHOCLADIUS OBU | 5.1 |
| 29 | SYNORTHOCLADIUS | .1 |
| 30 | WIEDEMANNIA SP. | .1 |
| 31 | SIMULIUM SP. | 19.8 |
| 32 | LYMNAEA SP. | 13.8 |
| 33 | OLIGOCHAETA | .2 |
| 34 | OLIGOCHAETA LUMB | .6 |
| 35 | TURBELLARI | 1.4 |

DIVERSITY INDEX 3.54

Table 17. Continued

SAMPLE: F84-25
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .1 |
| 2 | EPHEMERELLA INFR | .5 |
| 3 | HEPTAGENIA SOLIT | .5 |
| 4 | RHITHROGENA HAGE | .1 |
| 5 | STENONEMA SP. | 36 |
| 6 | OPHIOGOMPHUS SP. | .2 |
| 7 | BRACHYCENTRUS OC | 0 |
| 8 | CHEUMATOPSYCHE | 23.4 |
| 9 | HYDROPSYCHE OCCI | .3 |
| 10 | SYMPHITOPS COCKE | .6 |
| 11 | HYDROPTILA SP. | 6.4 |
| 12 | CERACLEA SP. | 4.2 |
| 13 | OECETIS SP. A | .1 |
| 14 | PSYCHOMYIA FLAVI | 2.2 |
| 15 | PARARGYRACTIS SP | .3 |
| 16 | OPTIOSERVUS SPP. | .1 |
| 17 | ZAITZEVIA PARVUL | .0 |
| 18 | DICROTENDIP SP.A | .6 |
| 19 | MICROTENDIPES SP | 8.3 |
| 20 | TANYTARSUS SP. B | .1 |
| 21 | STENOCHIRONOM SP | .1 |
| 22 | DIAMESA SP. B | 0 |
| 23 | CRICOTOPUS SP. B | 1.4 |
| 24 | EUKIEFFERIELLA B | .1 |
| 25 | ORTHOCLADIUS B | .8 |
| 26 | ORTHOCLADIUS OBU | 3.9 |
| 27 | SYNORTHOCLADIUS | .1 |
| 28 | SIMULIUM SP. | 1.5 |
| 29 | SPERCHON SP. | 0 |
| 30 | LEBERTIA SP. | 0 |
| 31 | FERRISSIA SP. | .2 |
| 32 | GYRAULUS SP. | 2.1 |
| 33 | LYMNAEA SP. | 1.5 |
| 34 | PHYSA SP. | .1 |
| 35 | OLIGOCHAETA LUMB | .7 |
| 36 | TURBELLARI | .2 |

DIVERSITY INDEX 3.06

Table 17. Continued

SAMPLE: F84-27

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .4 |
| 2 | HEPTAGENIA SOLIT | .4 |
| 3 | STENONEMA SP. | 4.9 |
| 4 | CHEUMATOPSYCHE | 25.4 |
| 5 | HYDROPSYCHE SP.A | 12.1 |
| 6 | HYDROPSYCHE OCCI | 2.2 |
| 7 | SYMPHITOPS COCKE | 2.7 |
| 8 | HYDROPTILA SP. | 3.1 |
| 9 | ZUMATRICHIA NOTO | .4 |
| 10 | CERACLEA SP. | 25 |
| 11 | PSYCHOMYIA FLAVI | 4 |
| 12 | PARARGYRACTIS SP | 4.5 |
| 13 | OPTIOSERVUS SPP. | .4 |
| 14 | MICROTENDIPES SP | 6.3 |
| 15 | STENOCHIRONOM SP | .4 |
| 16 | DIAMESA SP. B | .4 |
| 17 | CRICOTOPUS SP. B | 1.3 |
| 18 | ORTHOCLADIUS B | .4 |
| 19 | ORTHOCLADIUS OBU | 2.2 |
| 20 | WIEDEMANNIA SP. | .9 |
| 21 | FERRISSIA SP. | .4 |
| 22 | LYMNAEA SP. | .4 |
| 23 | TURBELLARI | 1.3 |

DIVERSITY INDEX 3.3

Table 17. Deep Water Monitoring Stations - Petite Ponar Grab Samples

SAMPLE: F84-03
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. 43.2 | |
| 2 | PHAENOPSECTRA SP | 2.5 |
| 3 | PHAENOPSECT SP.B | 2.5 |
| 4 | POLYPEDILUM SP.D | 6.2 |
| 5 | TANYTARSUS SP. B | 2.5 |
| 6 | STICTOCHIRONO SP | 2.5 |
| 7 | EUKIEFFERIELLA I | 1.[illegible] |
| 8 | OLIGOCHAETA | 39.[illegible] |

DIVERSITY INDEX 1.91

SAMPLE: F84-25
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CERACLEA SP. | .4 |
| 2 | CRYPTOCHIRONOMUS | 1 |
| 3 | PHAENOPSECT SP.B | .8 |
| 4 | POLYPEDILUM SP.D | 3.5 |
| 5 | PSEUDOCHIRONOMUS | .4 |
| 6 | ORTHOCLADIUS OBU | .2 |
| 7 | PROCLADIUS SP. A | 5.6 |
| 8 | OLIGOCHAETA | 88.2 |

DIVERSITY INDEX .76

SAMPLE: F84-28
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. 6 | |
| 2 | PROCLADIUS SP. A | 6.3 |
| 3 | OLIGOCHAETA | 87.7 |

DIVERSITY INDEX .66

SAMPLE: F84-28B
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. 5.4 | |
| 2 | PROCLADIUS SP. A | 4.1 |
| 3 | OLIGOCHAETA | 90.4 |

DIVERSITY INDEX .55

Table 17. Continued

SAMPLE: FC4-30
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | OPHIOGOMPHUS SP. | .3 |
| 2 | NECTOPSYCHE SP. | .6 |
| 3 | OECETIS SP. B | 2.2 |
| 4 | PALPOMY-GP SP. A | 7.3 |
| 5 | CRYPTOCHIRONOMUS | 4.1 |
| 6 | PARACLADOPE SP.B | 3.5 |
| 7 | PARACLADOPE SP.C | .3 |
| 8 | PARALAUTERBORNIE | 2.2 |
| 9 | POLYPEDILUM SP.B | 1.6 |
| 10 | POLYPEDILUM SP.D | 24.9 |
| 11 | PSEUDOCHIRONOMUS | 24.6 |
| 12 | PROCLADIUS SP. A | 3.2 |
| 13 | ARRENURUS SP. | .3 |
| 14 | PISIDIUM SP. | .3 |
| 15 | OLIGOCHAETA | 24.6 |

DIVERSITY INDEX 2.77

Table 17. Benthic Macroinvertebrate Sample Percentage Distribution and Diversity Data, Spring 1985

Shallow Water Monitoring Stations - Kick Samples

SAMPLE: 1-53C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 13.6 |
| 2 | EPHEMERELLA INFR | 35.4 |
| 3 | RHITHROGENA HAGE | 1.9 |
| 4 | PARALEPTOPHL MEM | 0 |
| 5 | AMELETUS VELOX | 0 |
| 6 | CAPNIA-GROUP SP. | 2.8 |
| 7 | ALLOPERLA-GROUP | .2 |
| 8 | PROSTOIA BESAMET | 6.7 |
| 9 | CULTUS PILATUS | .4 |
| 10 | ISOGENOIDES ELON | .2 |
| 11 | ISOPERLA FULVA | .6 |
| 12 | ISOPERLA QUINQUE | .8 |
| 13 | SKWALA PARALLELA | .1 |
| 14 | PTERONARCELLA BA | .4 |
| 15 | PTERONARCYS CALI | 0 |
| 16 | TAENIONEMA PACIF | .4 |
| 17 | BRACHYCENTRUS AM | .4 |
| 18 | ARCTOPSYCHE GRAN | .1 |
| 19 | CHEUMATOPSYCHE | .6 |
| 20 | HYDROPSYCHE OCCI | 4 |
| 21 | SYMPHITOPS COCKE | .4 |
| 22 | SYMPHITOPS SLOSS | .3 |
| 23 | HYDROPTILA SP. | .6 |
| 24 | LEPIDOSTOMA SP.A | 1.5 |
| 25 | OECETIS SP. A | .1 |
| 26 | OPTIOSERVUS SPP. | .6 |
| 27 | ZAITZEVIA PARVUL | .3 |
| 28 | ATHERIX VARIEGAT | .1 |
| 29 | MICROPSECTR SP.A | .1 |
| 30 | MICROTENDIPES SP | 0 |
| 31 | PARACLADOPE SP.B | .1 |
| 32 | PHAENOPSECTRA SP | 0 |
| 33 | POLYPEDILUM SP.A | 0 |
| 34 | TANYTARSUS SP. B | .3 |
| 35 | DIAMESA SP. B | .9 |
| 36 | PAGASTIA SP. | .1 |
| 37 | CRICOTOPUS SP. B | 8.9 |
| 38 | EUKIEFFERIELLA A | .6 |
| 39 | EUKIEFFERIELLA B | 4.3 |
| 40 | EUKIEFFERIELLA E | .3 |
| 41 | HETEROTRISSOCLAD | 0 |
| 42 | EUKIEFFERIELLA I | 0 |
| 43 | ORTHOCLADIUS (EU | 1.3 |
| 44 | ORTHOCLADIUS B | 1.6 |
| 45 | ORTHOCLADIUS MAL | .3 |
| 46 | ORTHOCLADIUS OBU | 6.8 |
| 47 | THIENEMANIELL SP | 0 |
| 48 | TRISSOCLADIUS SP | .1 |
| 49 | SIMULIUM SP. | .7 |
| 50 | HEXATOMA SP. | .2 |
| 51 | TIPULA SP. | 0 |

DIVERSITY INDEX 3.55

Table 17. Continued

SAMPLE: 2-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 4.7 |
| 2 | DRUNELLA GRANDIS | .1 |
| 3 | EPHEMERELLA INFR | 5.5 |
| 4 | EPEORUS ALBERTAE | .2 |
| 5 | RHITHROGENA HAGE | 10.5 |
| 6 | PARALEPTOPHL MEM | .7 |
| 7 | AMELETUS VELOX | .4 |
| 8 | CAPNIA-GROUP SP. | 1.1 |
| 9 | ALLOPERLA-GROUP | 3.4 |
| 10 | PROSTOIA BESAMET | 3.9 |
| 11 | CALINEURIA CALIF | 1.1 |
| 12 | CLAASSENI SABULO | .7 |
| 13 | HESPEROPERLA PAC | .1 |
| 14 | CULTUS PILATUS | 1.3 |
| 15 | ISOGENOIDES ELON | .1 |
| 16 | ISOPERLA FULVA | 3.9 |
| 17 | PTERONARCYS CALI | .5 |
| 18 | TAENIONEMA PACIF | .1 |
| 19 | ARCTOPSYCHE GRAN | .1 |
| 20 | CHEUMATOPSYCHE | 1.4 |
| 21 | HYDROPSYCHE OCCI | .6 |
| 22 | SYMPHITOPS COCKE | .2 |
| 23 | SYMPHITOPS SLOSS | 2 |
| 24 | HYDROPTILA SP. | .7 |
| 25 | LEPIDOSTOMA SP.A | .5 |
| 26 | OECETIS SP. A | .1 |
| 27 | PSYCHOMYIA FLAVI | .1 |
| 28 | OREODYTES SCITIL | .1 |
| 29 | OPTIOSERVUS SPP. | .4 |
| 30 | ZAITZEVIA PARVUL | .1 |
| 31 | MICROPSECTR SP.C | 5.7 |
| 32 | PHAENOPSECTRA SP | .1 |
| 33 | DIAMESA SP. B | 10 |
| 34 | PAGASTIA SP. | .1 |
| 35 | CRICOTOPUS SP. B | 11.5 |
| 36 | EUKIEFFERIELLA A | 1.5 |
| 37 | EUKIEFFERIELLA B | 1.8 |
| 38 | EUKIEFFERIELLA E | .2 |
| 39 | ORTHOCLADIUS (EU | 6.8 |
| 40 | ORTHOCLADIUS B | .2 |
| 41 | ORTHOCLADIUS MAL | 13.6 |
| 42 | ORTHOCLADIUS OBU | 1.2 |
| 43 | DOLICHOPODIDAE | .1 |
| 44 | SIMULIUM SP. | 2.5 |
| 45 | ANTOCHA SP. | .1 |
| 46 | HEXATOMA SP. | .2 |
| 47 | CAUDATELLA HYSTR | .2 |

DIVERSITY INDEX 4.27

SAMPLE: 4-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 19.8 |
| 2 | EPHEMERELLA INFR | 1.2 |
| 3 | RHITHROGENA HAGE | .8 |
| 4 | PARALEPTOPHL MEM | .1 |
| 5 | AMELETUS VELOX | .1 |
| 6 | CAPNIA-GROUP SP. | 13.2 |
| 7 | ALLOPERLA-GROUP | .4 |
| 8 | PROSTOIA BESAMET | .1 |
| 9 | HESPEROPERLA PAC | .1 |
| 10 | CULTUS PILATUS | .1 |
| 11 | ISOGENOIDES ELON | .2 |
| 12 | ISOPERLA FULVA | 1 |
| 13 | PTERONARCELLA BA | .4 |
| 14 | PTERONARCYS CALI | .1 |
| 15 | TAENIONEMA PACIF | 2.4 |
| 16 | BRACHYCENTRUS OC | .1 |
| 17 | ARCTOPSYCHE GRAN | .1 |
| 18 | CHEUMATOPSYCHE | 5 |
| 19 | HYDROPSYCHE OCCI | 13.4 |
| 20 | SYMPHITOPS COCKE | 3.5 |
| 21 | SYMPHITOPS SLOSS | .6 |
| 22 | HYDROPTILA SP. | 8.3 |
| 23 | PSYCHOMYIA FLAVI | 1.3 |
| 24 | PARARGYRACTIS SP | .3 |
| 25 | OREODYTES SCITIL | .1 |
| 26 | OPTIOSERVUS SPP. | 1.2 |
| 27 | ZAITZEVIA PARVUL | .5 |
| 28 | MICROTENDIPES SP | 3.6 |
| 29 | PARACLADOPE SP.C | .1 |
| 30 | DIAMESA SP. B | 1.6 |
| 31 | PAGASTIA SP. | .1 |
| 32 | CRICOTOPUS SP. B | 5.2 |
| 33 | EUKIEFFERIELLA A | .6 |
| 34 | EUKIEFFERIELLA B | 2 |
| 35 | EUKIEFFERIELLA E | .1 |
| 36 | EUKIEFFERIELLA F | .1 |
| 37 | HETEROTRISSOCLAD | .1 |
| 38 | ORTHOCLADIUS (EU | 2.9 |
| 39 | ORTHOCLADIUS MAL | .1 |
| 40 | ORTHOCLADIUS OBU | 3.3 |
| 41 | TRISSOCLADIUS SP | .1 |
| 42 | WIEDEMANNIA SP. | .1 |
| 43 | SIMULIUM SP. | 5.7 |

DIVERSITY INDEX 3.95

Table 17. Continued

SAMPLE: 5-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 26.5 |
| 2 | EPHEMERELLA INFR | 15.4 |
| 3 | RHITHROGENA HAGE | 7 |
| 4 | PARALEPTOPHL MEM | .7 |
| 5 | AMELETUS VELOX | .2 |
| 6 | CAPNIA-GROUP SP. | 10.9 |
| 7 | ALLOPERLA-GROUP | .2 |
| 8 | PROSTOIA BESAMET | .7 |
| 9 | CULTUS PILATUS | .7 |
| 10 | ISOGENOIDES ELON | .5 |
| 11 | ISOPERLA FULVA | 3.4 |
| 12 | ISOPERLA QUINQUE | 2.9 |
| 13 | SKWALA PARALLELA | .1 |
| 14 | PTERONARCELLA BA | .2 |
| 15 | TAENIONEMA PACIF | 7.6 |
| 16 | CHEUMATOPSYCHE | .7 |
| 17 | HYDROPSYCHE OCCI | 3 |
| 18 | SYMPHITOPS COCKE | .1 |
| 19 | HYDROPTILA SP. | 1.5 |
| 20 | PSYCHOMYIA FLAVI | .4 |
| 21 | OPTIOSERVUS SPP. | .2 |
| 22 | ZAITZEVIA PARVUL | .2 |
| 23 | TANYTARSUS SP. B | .1 |
| 24 | DIAMESA SP. B | .5 |
| 25 | PAGASTIA SP. | .1 |
| 26 | CRICOTOPUS SP. B | 4 |
| 27 | EUKIEFFERIELLA A | .3 |
| 28 | EUKIEFFERIELLA B | 2.2 |
| 29 | EUKIEFFERIELLA E | .2 |
| 30 | HETEROTRISSOCLAD | .2 |
| 31 | ORTHOCLADIUS (EU | 1.8 |
| 32 | ORTHOCLADIUS B | .6 |
| 33 | ORTHOCLADIUS MAL | .2 |
| 34 | ORTHOCLADIUS OBU | 3.1 |
| 35 | ABLABESMYIA SP. | .1 |
| 36 | DOLICHOPODIDAE | .1 |
| 37 | SIMULIUM SP. | 3.6 |
| 38 | OLIGOCHAETA | .2 |

DIVERSITY INDEX 3.69

SAMPLE: 6-53C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 4.1 |
| 2 | EPHEMERELLA INFR | 32.4 |
| 3 | HEPTAGENIA SOLIT | .3 |
| 4 | RHITHROGENA HAGE | 2.5 |
| 5 | PARALEPTOPHL MEM | .1 |
| 6 | AMELETUS VELOX | 1 |
| 7 | CAPNIA-GROUP SP. | 4.8 |
| 8 | PROSTOIA BESAMET | .2 |
| 9 | CALINEURIA CALIF | .1 |
| 10 | CULTUS PILATUS | 1.2 |
| 11 | ISOGENOIDES ELON | .2 |
| 12 | ISOPERLA FULVA | .8 |
| 13 | ISOPERLA QUINQUE | 1 |
| 14 | SKWALA PARALLELA | .1 |
| 15 | TAENIONEMA PACIF | .3 |
| 16 | ARCTOPSYCHE GRAN | .1 |
| 17 | CHEUMATOPSYCHE | 9.9 |
| 18 | HYDROPSYCHE OCCI | 1.9 |
| 19 | SYMPHITOPS COCKE | 1.5 |
| 20 | SYMPHITOPS SLOSS | .1 |
| 21 | HYDROPTILA SP. | 3.6 |
| 22 | ZUMATRICHIA NOTO | .1 |
| 23 | OECETIS SP. A | 2.1 |
| 24 | PSYCHOMYIA FLAVI | 5.3 |
| 25 | PARARGYRACTIS SP | 1 |
| 26 | OPTIOSERVUS SPP. | .4 |
| 27 | ZAITZEVIA PARVUL | 1.2 |
| 28 | MICROTENDIPES SP | 2.6 |
| 29 | PHAENOPSECTRA SP | .1 |
| 30 | POLYPEDILUM SP.A | .1 |
| 31 | TANYTARSUS SP. B | 1.8 |
| 32 | DIAMESA SP. B | .1 |
| 33 | PAGASTIA SP. | .8 |
| 34 | CRICOTOPUS SP. B | 6.3 |
| 35 | EUKIEFFERIELLA A | .7 |
| 36 | EUKIEFFERIELLA B | .5 |
| 37 | EUKIEFFERIELLA E | .2 |
| 38 | HETEROTRISSOCLAD | .1 |
| 39 | ORTHOCLADIUS (EU | 3.2 |
| 40 | ORTHOCLADIUS B | 1.8 |
| 41 | ORTHOCLADIUS MAL | .4 |
| 42 | ORTHOCLADIUS OBU | 5.1 |
| 43 | CHELIFERA SP. | .1 |
| 44 | SIMULIUM SP. | .2 |

DIVERSITY INDEX 3.9

Table 17. Continued

SAMPLE: 8-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 3.6 |
| 2 | EPHEMERELLA INFR | 29 |
| 3 | EPEORUS ALBERTAE | 0 |
| 4 | RHITHROGENA HAGE | 1.4 |
| 5 | PARALEPTOPHL MEM | 0 |
| 6 | AMELETUS VELOX | .3 |
| 7 | CAPNIA-GROUP SP. | .1 |
| 8 | PROSTOIA BESAMET | .5 |
| 9 | CULTUS PILATUS | .8 |
| 10 | ISOGENOIDES ELON | 0 |
| 11 | ISOPERLA FULVA | 1.4 |
| 12 | ISOPERLA QUINQUE | 1 |
| 13 | SKWALA PARALLELA | 0 |
| 14 | PTERONARCELLA BA | 0 |
| 15 | PTERONARCYS CALI | 0 |
| 16 | TAENIONEMA PACIF | .5 |
| 17 | ARCTOPSYCHE GRAN | .3 |
| 18 | CHEUMATOPSYCHE | 1.5 |
| 19 | HYDROPSYCHE OCCI | 3.7 |
| 20 | SYMPHITOPS COCKE | 1.7 |
| 21 | SYMPHITOPS SLOSS | 0 |
| 22 | HYDROPTILA SP. | .7 |
| 23 | OECETIS SP. A | .1 |
| 24 | PSYCHOMYIA FLAVI | .4 |
| 25 | RHYACOPHILA BIFI | 0 |
| 26 | PARARGYRACTIS SP | .5 |
| 27 | OPTIOSERVUS SPP. | .2 |
| 28 | ZAITZEVIA PARVUL | .1 |
| 29 | DICROTENDIP SP.C | 0 |
| 30 | MICROPSECTR SP.A | 0 |
| 31 | MICROTENDIPES SP | 1.1 |
| 32 | PHAENOPSECTRA SP | .1 |
| 33 | POLYPEDILUM SP.A | .4 |
| 34 | TANYTARSUS SP. B | .9 |
| 35 | DIAMESA SP. B | 1.7 |
| 36 | PAGASTIA SP. | .2 |
| 37 | BRILLIA SP. | 0 |
| 38 | CRICOTOPUS SP. B | 19.5 |
| 39 | EUKIEFFERIELLA A | 2.9 |
| 40 | EUKIEFFERIELLA B | 4.3 |
| 41 | EUKIEFFERIELLA E | .2 |
| 42 | HETEROTRISSOCLAD | .1 |
| 43 | ORTHOCLADIUS (EU | 5 |
| 44 | ORTHOCLADIUS B | 4.4 |
| 45 | ORTHOCLADIUS MAL | 1.4 |
| 46 | ORTHOCLADIUS OBU | 3 |
| 47 | ABLABESMYIA SP. | .2 |
| 48 | CHELIFERA SP. | 0 |
| 49 | WIEDEMANNIA SP. | 0 |
| 50 | SIMULIUM SP. | .6 |
| 51 | PACIFASTICUS SP. | 0 |
| 52 | OLIGOCHAETA | 5.3 |
| 53 | OLIGOCHAETA LUMB | .3 |

DIVERSITY INDEX 3.8

Table 17. Continued

SAMPLE: 9-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 11.8 |
| 2 | EPHEMERELLA INFR | 15 |
| 3 | HEPTAGENIA SOLIT | .1 |
| 4 | RHITHROGENA HAGE | 2.9 |
| 5 | PARALEPTOPHL MEM | .5 |
| 6 | AMELETUS VELOX | .3 |
| 7 | CAPNIA-GROUP SP. | 10.2 |
| 8 | ALLOPERLA-GROUP | 0 |
| 9 | PROSTOIA BESAMET | .7 |
| 10 | CALINEURIA CALIF | 0 |
| 11 | CULTUS PILATUS | .2 |
| 12 | ISOGENOIDES ELON | .6 |
| 13 | ISOPERLA FULVA | 1.7 |
| 14 | ISOPERLA QUINQUE | .9 |
| 15 | SKWALA PARALLELA | .1 |
| 16 | PTERONARCELLA BA | .1 |
| 17 | TAENIONEMA PACIF | 1.4 |
| 18 | CHEUMATOPSYCHE | 1.4 |
| 19 | HYDROPSYCHE OCCI | 1.4 |
| 20 | SYMPHITOPS COCKE | .2 |
| 21 | HYDROPTILA SP. | 6.2 |
| 22 | OECETIS SP. A | .8 |
| 23 | PSYCHOMYIA FLAVI | 2 |
| 24 | OREODYTES SCITIL | 0 |
| 25 | OPTIOSERVUS SPP. | 0 |
| 26 | ZAITZEVIA PARVUL | .2 |
| 27 | MICROTENDIPES SP | .5 |
| 28 | PARACLADOPE SP.B | 0 |
| 29 | TANYTARSUS SP. B | 10.8 |
| 30 | DIAMESA SP. B | 2.2 |
| 31 | CRICOTOPUS SP. B | 15.2 |
| 32 | EUKIEFFERIELLA A | .5 |
| 33 | EUKIEFFERIELLA B | .9 |
| 34 | EUKIEFFERIELLA E | 0 |
| 35 | HETEROTRISSOCLAD | 0 |
| 36 | ORTHOCLADIUS (EU | 5.9 |
| 37 | ORTHOCLADIUS B | .7 |
| 38 | ORTHOCLADIUS MAL | .1 |
| 39 | ORTHOCLADIUS OBU | 3.8 |
| 40 | ABLABESMYIA SP. | 0 |
| 41 | SIMULIUM SP. | .2 |
| 42 | PHYSA SP. | 0 |

DIVERSITY INDEX 3.91

Table 17. Continued

SAMPLE: 10-53C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 5.3 |
| 2 | DRUNELLA GRANDIS | 0 |
| 3 | EPHEMERELLA INFR | 26.5 |
| 4 | EPEORUS ALBERTAE | .1 |
| 5 | HEPTAGENIA SOLIT | 0 |
| 6 | RHITHROGENA HAGE | 14.6 |
| 7 | PARALEPTOPHL MEM | .8 |
| 8 | CAPNIA-GROUP SP. | 1.1 |
| 9 | PROSTOIA BESAMET | .1 |
| 10 | CLAASSENI SABULO | .4 |
| 11 | HESPEROPERLA PAC | 0 |
| 12 | CULTUS PILATUS | .5 |
| 13 | ISOGENOIDES ELON | .1 |
| 14 | ISOPERLA FULVA | .7 |
| 15 | ISOPERLA QUINQUE | .7 |
| 16 | SKWALA PARALLELA | 0 |
| 17 | PTERONARCELLA BA | .4 |
| 18 | TAENIONEMA PACIF | 3.3 |
| 19 | PROTOPTILA SP. | 0 |
| 20 | ARCTOPSYCHE GRAN | .2 |
| 21 | CHEUMATOPSYCHE | 2 |
| 22 | HYDROPSYCHE OCCI | 2.2 |
| 23 | SYMPHITOPS COCKE | .8 |
| 24 | HYDROPTILA SP. | 2.8 |
| 25 | ZUMATRICHIA NOTO | .1 |
| 26 | LEPIDOSTOMA SP.A | .1 |
| 27 | OECETIS SP. A | 0 |
| 28 | PSYCHOMYIA FLAVI | .1 |
| 29 | PARARGYRACTIS SP | .3 |
| 30 | OPTIOSERVUS SPP. | 2.5 |
| 31 | ZAITZEVIA PARVUL | .7 |
| 32 | ATHERIX VARIEGAT | .1 |
| 33 | MICROPSECTR SP.A | .2 |
| 34 | POLYPEDILUM SP.A | 0 |
| 35 | TANYTARSUS SP. B | 1.3 |
| 36 | DIAMESA SP. B | .4 |
| 37 | PAGASTIA SP. | .8 |
| 38 | CRICOTOPUS SP. B | 2.3 |
| 39 | EUKIEFFERIELLA A | 1 |
| 40 | EUKIEFFERIELLA B | 1.6 |
| 41 | EUKIEFFERIELLA E | 1.4 |
| 42 | EUKIEFFERIELLA F | .2 |
| 43 | ORTHOCLADIUS (EU | 1.2 |
| 44 | ORTHOCLADIUS B | .2 |
| 45 | ORTHOCLADIUS MAL | 2.2 |
| 46 | ORTHOCLADIUS OBU | 1.3 |
| 47 | SYNORTHOCLADIUS | 0 |
| 48 | THIENEMANIELL SP | 0 |
| 49 | TRISSOCLADIUS SP | .1 |
| 50 | ABLABESMYIA SP. | 0 |
| 51 | DOLICHOPODIDAE | .1 |
| 52 | CHELIFERA SP. | 0 |
| 53 | WIEDEMANNIA SP. | .3 |
| 54 | SIMULIUM SP. | 18.1 |
| 55 | ANTOCHA SP. | .5 |
| 56 | OLIGOCHAETA LUMB | 0 |
| 57 | TURBELLARI | 0 |
| 58 | CAUDATELLA HYSTR | 0 |

DIVERSITY INDEX 3.8

SAMPLE: 11-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 17.5 |
| 2 | EPHEMERELLA INFR | 14.1 |
| 3 | HEPTAGENIA SOLIT | .1 |
| 4 | RHITHROGENA HAGE | 2.6 |
| 5 | PARALEPTOPHL MEM | .3 |
| 6 | CAPNIA-GROUP SP. | .5 |
| 7 | ALLOPERLA-GROUP | .1 |
| 8 | PROSTOIA BESAMET | .1 |
| 9 | CULTUS PILATUS | .4 |
| 10 | ISOGENOIDES ELON | .2 |
| 11 | ISOPERLA FULVA | 1.6 |
| 12 | ISOPERLA QUINQUE | .8 |
| 13 | PTERONARCELLA BA | .3 |
| 14 | TAENIONEMA PACIF | 7 |
| 15 | CHEUMATOPSYCHE | .4 |
| 16 | HYDROPSYCHE OCCI | 1 |
| 17 | HYDROPTILA SP. | 1.9 |
| 18 | OPTIOSERVUS SPP. | .1 |
| 19 | PARACLADOPE SP.B | .1 |
| 20 | PHAENOPSECTRA SP | .1 |
| 21 | TANYTARSUS SP. B | .4 |
| 22 | DIAMESA SP. B | .6 |
| 23 | PAGASTIA SP. | .2 |
| 24 | BRILLIA SP. | .1 |
| 25 | CRICOTOPUS SP. B | 6.8 |
| 26 | EUKIEFFERIELLA A | .3 |
| 27 | EUKIEFFERIELLA B | 1.6 |
| 28 | EUKIEFFERIELLA E | .4 |
| 29 | HETEROTRISSOCLAD | .1 |
| 30 | ORTHOCLADIUS (EU | 4.9 |
| 31 | ORTHOCLADIUS B | 7.6 |
| 32 | ORTHOCLADIUS MAL | .3 |
| 33 | ORTHOCLADIUS OBU | 20 |
| 34 | WIEDEMANNIA SP. | .1 |
| 35 | SIMULIUM SP. | 7.3 |

DIVERSITY INDEX 3.6

SAMPLE: 13-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 3.6 |
| 2 | EPHEMERELLA INFR | 21.4 |
| 3 | HEPTAGENIA SOLIT | .1 |
| 4 | RHITHROGENA HAGE | 2.1 |
| 5 | PARALEPTOPHL MEM | .4 |
| 6 | AMELETUS VELOX | .1 |
| 7 | CAPNIA-GROUP SP. | 1.8 |
| 8 | ALLOPERLA-GROUP | .1 |
| 9 | CLAASSENI SABULO | .1 |
| 10 | CULTUS PILATUS | 1.3 |
| 11 | ISOGENOIDES ELON | .6 |
| 12 | ISOPERLA FULVA | 1 |
| 13 | ISOPERLA QUINQUE | .8 |
| 14 | SKWALA PARALLELA | .1 |
| 15 | PTERONARCELLA BA | .4 |
| 16 | TAENIONEMA PACIF | 1.3 |
| 17 | BRACHYCENTRUS OC | .1 |
| 18 | CHEUMATOPSYCHE | 1.7 |
| 19 | HYDROPSYCHE OCCI | 1.8 |
| 20 | SYMPHITOPS COCKE | .1 |
| 21 | SYMPHITOPS SLOSS | .1 |
| 22 | HYDROPTILA SP. | 5.2 |
| 23 | OECETIS SP. A | .2 |
| 24 | PSYCHOMYIA FLAVI | .1 |
| 25 | OREODYTES SCITIL | .1 |
| 26 | OPTIOSERVUS SPP. | .2 |
| 27 | ZAITZEVIA PARVUL | .5 |
| 28 | CRYPTOCHIRONOMUS | .1 |
| 29 | MICROTENDIPES SP | 2.8 |
| 30 | PARACLADOPE SP.B | .7 |
| 31 | PHAENOPSECTRA SP | 1.3 |
| 32 | TANYTARSUS SP. B | 1.7 |
| 33 | DIAMESA SP. B | 1.6 |
| 34 | PAGASTIA SP. | .7 |
| 35 | CRICOTOPUS SP. B | 6.9 |
| 36 | EUKIEFFERIELLA A | .7 |
| 37 | EUKIEFFERIELLA B | 1.6 |
| 38 | EUKIEFFERIELLA E | .4 |
| 39 | HETEROTRISSOCLAD | .1 |
| 40 | ORTHOCLADIUS (EU | 3.2 |
| 41 | ORTHOCLADIUS B | 1.3 |
| 42 | ORTHOCLADIUS MAL | 1.2 |
| 43 | ORTHOCLADIUS OBU | 28.9 |
| 44 | ABLABESMYIA SP. | .3 |
| 45 | WIEDEMANNIA SP. | .1 |
| 46 | SIMULIUM SP. | .4 |
| 47 | HEXATOMA SP. | .4 |
| 48 | OLIGOCHAETA | .6 |

DIVERSITY INDEX 3.81

SAMPLE: 14-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 6 |
| 2 | CAENIS SIMULANS | .4 |
| 3 | EPHEMERELLA INFR | 12.7 |
| 4 | RHITHROGENA HAGE | 2.6 |
| 5 | PARALEPTOPHL MEM | 1.1 |
| 6 | AMELETUS VELOX | .2 |
| 7 | CAPNIA-GROUP SP. | 5.8 |
| 8 | ALLOPERLA-GROUP | .2 |
| 9 | HESPEROPERLA PAC | .2 |
| 10 | CULTUS PILATUS | .7 |
| 11 | ISOGENOIDES ELON | 1.1 |
| 12 | ISOPERLA FULVA | 1.3 |
| 13 | ISOPERLA QUINQUE | .4 |
| 14 | SKWALA PARALLELA | .6 |
| 15 | TAENIONEMA PACIF | 1.7 |
| 16 | CHEUMATOPSYCHE | .2 |
| 17 | HYDROPSYCHE OCCI | .9 |
| 18 | HYDROPTILA SP. | 6.5 |
| 19 | OECETIS SP. A | .4 |
| 20 | PSYCHOMYIA FLAVI | .2 |
| 21 | OREODYTES SCITIL | .2 |
| 22 | OPTIOSERVUS SPP. | .2 |
| 23 | ZAITZEVIA PARVUL | .2 |
| 24 | MICROTENDIPES SP | 2.8 |
| 25 | PARACLADOPE SP.B | .4 |
| 26 | PARATANYTARSUS | .4 |
| 27 | PHAENOPSECTRA SP | .4 |
| 28 | TANYTARSUS SP. B | 1.1 |
| 29 | DIAMESA SP. B | 1.9 |
| 30 | CRICOTOPUS SP. B | 6 |
| 31 | EUKIEFFERIELLA A | .4 |
| 32 | EUKIEFFERIELLA B | .6 |
| 33 | EUKIEFFERIELLA E | .4 |
| 34 | HETEROTRISSOCLAD | .6 |
| 35 | ORTHOCLADIUS (EU | 1.9 |
| 36 | ORTHOCLADIUS B | 2 |
| 37 | ORTHOCLADIUS MAL | .7 |
| 38 | ORTHOCLADIUS OBU | 35.4 |
| 39 | WIEDEMANNIA SP. | .4 |
| 40 | SIMULIUM SP. | .9 |
| 41 | OLIGOCHAETA | .4 |

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SAMPLE: 15-53C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 5.5 |
| 2 | EPHEMERELLA INFR | 10.4 |
| 3 | RHITHROGENA HAGE | 5.9 |
| 4 | PARALEPTOPHL MEM | 1.3 |
| 5 | AMELETUS VELOX | .3 |
| 6 | CAPNIA-GROUP SP. | 6.2 |
| 7 | ALLOPERLA-GROUP | .1 |
| 8 | CLAASSENI SABULO | .1 |
| 9 | CULTUS PILATUS | 1.1 |
| 10 | ISOGENOIDES ELON | .6 |
| 11 | ISOPERLA FULVA | .8 |
| 12 | ISOPERLA QUINQUE | .6 |
| 13 | SKWALA PARALLELA | .2 |
| 14 | PTERONARCELLA BA | .1 |
| 15 | TAENIONEMA PACIF | .8 |
| 16 | CHEUMATOPSYCHE | .7 |
| 17 | HYDROPSYCHE OCCI | .5 |
| 18 | HYDROPTILA SP. | 10.3 |
| 19 | OECETIS SP. A | .2 |
| 20 | OPTIOSERVUS SPP. | .1 |
| 21 | ZAITZEVIA PARVUL | .2 |
| 22 | PARACLADOPE SP.B | .5 |
| 23 | PHAENOPSECTRA SP | .6 |
| 24 | TANYTARSUS SP. B | 1.9 |
| 25 | DIAMESA SP. B | 3.6 |
| 26 | PAGASTIA SP. | .1 |
| 27 | CRICOTOPUS SP. B | 7.2 |
| 28 | EUKIEFFERIELLA A | .1 |
| 29 | EUKIEFFERIELLA B | .2 |
| 30 | EUKIEFFERIELLA E | .1 |
| 31 | HETEROTRISSOCLAD | .1 |
| 32 | ORTHOCLADIUS (EU | 4.3 |
| 33 | ORTHOCLADIUS B | .8 |
| 34 | ORTHOCLADIUS OBU | 34 |
| 35 | ABLABESMYIA SP. | .1 |
| 36 | SIMULIUM SP. | .1 |
| 37 | HEXATOMA SP. | .1 |
| 38 | OLIGOCHAETA | .2 |

DIVERSITY INDEX 3.48

SAMPLE: 19-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 20.7 |
| 2 | EPHEMERELLA INFR | 17.7 |
| 3 | HEPTAGENIA SOLIT | .4 |
| 4 | RHITHROGENA HAGE | 1.6 |
| 5 | PARALEPTOPHL MEM | 1.7 |
| 6 | AMELETUS VELOX | .2 |
| 7 | CAPNIA-GROUP SP. | 2.1 |
| 8 | PROSTOIA BESAMET | .8 |
| 9 | CULTUS PILATUS | 1.1 |
| 10 | ISOGENOIDES ELON | .1 |
| 11 | ISOPERLA FULVA | .8 |
| 12 | ISOPERLA QUINQUE | 1 |
| 13 | TAENIONEMA PACIF | .6 |
| 14 | CHEUMATOPSYCHE | .5 |
| 15 | HYDROPSYCHE OCCI | .7 |
| 16 | SYMPHITOPS COCKE | .3 |
| 17 | HYDROPTILA SP. | 6.4 |
| 18 | CERACLEA SP. | .1 |
| 19 | PSYCHOMYIA FLAVI | 1.1 |
| 20 | ZAITZEVIA PARVUL | .1 |
| 21 | POLYPEDILUM SP.A | .1 |
| 22 | TANYTARSUS SP. B | .1 |
| 23 | DIAMESA SP. B | 8.7 |
| 24 | CRICOTOPUS SP. B | 11 |
| 25 | EUKIEFFERIELLA A | .4 |
| 26 | EUKIEFFERIELLA B | 3.6 |
| 27 | EUKIEFFERIELLA E | .2 |
| 28 | ORTHOCLADIUS (EU | 8.7 |
| 29 | ORTHOCLADIUS B | .1 |
| 30 | ORTHOCLADIUS MAL | 3.4 |
| 31 | ORTHOCLADIUS OBU | 5 |
| 32 | ABLABESMYIA SP. | .1 |
| 33 | SIMULIUM SP. | .3 |

DIVERSITY INDEX 3.69

SAMPLE: 21-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 3.4 |
| 2 | DRUNELLA GRANDIS | .5 |
| 3 | EPHEMERELLA INFR | 64.1 |
| 4 | HEPTAGENIA SOLIT | .1 |
| 5 | RHITHROGENA HAGE | .9 |
| 6 | PARALEPTOPHL MEM | .4 |
| 7 | AMELETUS VELOX | .1 |
| 8 | PROSTOIA BESAMET | .2 |
| 9 | CLAASSENI SABULO | .3 |
| 10 | HESPEROPERLA PAC | .1 |
| 11 | CULTUS PILATUS | .2 |
| 12 | ISOGENOIDES ELON | .3 |
| 13 | ISOPERLA FULVA | .5 |
| 14 | ISOPERLA QUINQUE | .1 |
| 15 | SKWALA PARALLELA | .1 |
| 16 | PTERONARCYS CALI | .2 |
| 17 | TAENIONEMA PACIF | .5 |
| 18 | BRACHYCENTRUS AM | .1 |
| 19 | ARCTOPSYCHE GRAN | .4 |
| 20 | CHEUMATOPSYCHE | 2.7 |
| 21 | HYDROPSYCHE OCCI | 1.2 |
| 22 | SYMPHITOPS COCKE | .7 |
| 23 | SYMPHITOPS SLOSS | .2 |
| 24 | HYDROPTILA SP. | 8.3 |
| 25 | CERACLEA SP. | .2 |
| 26 | PSYCHOMYIA FLAVI | 1 |
| 27 | OPTIOSERVUS SPP. | .2 |
| 28 | ZAITZEVIA PARVUL | .7 |
| 29 | MICROTENDIPES SP | 1.3 |
| 30 | PHAENOPSECTRA SP | .1 |
| 31 | PHAENOPSECT SP.B | .1 |
| 32 | TANYTARSUS SP. B | .1 |
| 33 | DIAMESA SP. B | .1 |
| 34 | PAGASTIA SP. | .9 |
| 35 | CRICOTOPUS SP. B | 2 |
| 36 | CRICOTOPUS SP. C | .1 |
| 37 | EUKIEFFERIELLA B | .2 |
| 38 | EUKIEFFERIELLA E | .1 |
| 39 | ORTHOCLADIUS (EU | 2.4 |
| 40 | ORTHOCLADIUS B | .1 |
| 41 | ORTHOCLADIUS MAL | 2 |
| 42 | ORTHOCLADIUS OBU | 1.9 |
| 43 | TRISSOCLADIUS SP | 1 |
| 44 | SIMULIUM SP. | .1 |
| 45 | OLIGOCHAETA | .1 |
| 46 | OLIGOCHAETA LUMB | 2 |
| 47 | TURBELLARI | .3 |

DIVERSITY INDEX 2.48

SAMPLE: 23-53C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 1.8 |
| 2 | CAENIS SIMULANS | 1.4 |
| 3 | EPHEMERELLA INFR | .4 |
| 4 | RHITHROGENA HAGE | .8 |
| 5 | STENONEMA SP. | .3 |
| 6 | CAPNIA-GROUP SP. | .1 |
| 7 | TAENIONEMA PACIF | .9 |
| 8 | AESHNA SP. | .4 |
| 9 | HYDROPTILA SP. | 1 |
| 10 | TRIAENODES SP. | .1 |
| 11 | POLYCENTROPUS SP | .3 |
| 12 | DUBIRAPHIA SP. | .3 |
| 13 | MICROPSECTR SP.A | .5 |
| 14 | MICROPSECTR SP.C | .1 |
| 15 | PHAENOPSECT SP.B | .3 |
| 16 | TANYTARSUS SP. B | .1 |
| 17 | DIAMESA SP. B | 1.2 |
| 18 | PAGASTIA SP. | 1.4 |
| 19 | POTTHASTIA SP. | .1 |
| 20 | CORYNONEURA SP. | .1 |
| 21 | CRICOTOPUS SP. B | 3.5 |
| 22 | ORTHOCLADIUS (EU | 2.5 |
| 23 | ORTHOCLADIUS B | .1 |
| 24 | ORTHOCLADIUS NIG | 2.6 |
| 25 | ORTHOCLADIUS OBU | 17.8 |
| 26 | SYNORTHOCLADIUS | 2.1 |
| 27 | TRISSOCLADIUS SP | 2.3 |
| 28 | SIMULIUM SP. | 2.5 |
| 29 | HYALELLA AZTECA | 25.6 |
| 30 | GYRAULUS SP. | 1.7 |
| 31 | PHYSA SP. | .4 |
| 32 | OLIGOCHAETA | .3 |
| 33 | TURBELLARI | .4 |
| 34 | MYSTACIDES SP. | .1 |
| 35 | ORTHOCLADIUS G | 26.4 |

DIVERSITY INDEX 3.28

SAMPLE: 24-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | 1.5 |
| 2 | EPHEMERELLA INFR | .8 |
| 3 | HEPTAGENIA SOLIT | .1 |
| 4 | RHITHROGENA HAGE | .7 |
| 5 | STENONEMA SP. | 3.7 |
| 6 | PARALEPTOPHL MEM | .1 |
| 7 | PROSTOIA BESAMET | .1 |
| 8 | ISOGENOIDES ELON | .4 |
| 9 | TAENIONEMA PACIF | .3 |
| 10 | CHEUMATOPSYCHE | 3.4 |
| 11 | HYDROPSYCHE OCCI | .1 |
| 12 | SYMPHITOPS COCKE | .6 |
| 13 | HYDROPTILA SP. | .4 |
| 14 | CERACLEA SP. | .2 |
| 15 | PSYCHOMYIA FLAVI | .1 |
| 16 | ZAITZEVIA PARVUL | .6 |
| 17 | MICROPSECTR SP.A | .9 |
| 18 | MICROTENDIPES SP | .6 |
| 19 | PHAENOPSECTRA SP | 0 |
| 20 | POLYPEDILUM SP.A | 0 |
| 21 | DIAMESA SP. B | 3.6 |
| 22 | PAGASTIA SP. | .2 |
| 23 | CRICOTOPUS SP. B | 24.3 |
| 24 | EUKIEFFERIELLA A | 0 |
| 25 | EUKIEFFERIELLA B | 1.6 |
| 26 | EUKIEFFERIELLA E | .4 |
| 27 | ORTHOCLADIUS (EU | 9 |
| 28 | ORTHOCLADIUS B | .3 |
| 29 | ORTHOCLADIUS MAL | 2.5 |
| 30 | ORTHOCLADIUS OBU | 33.8 |
| 31 | SYNORTHOCLADIUS | .9 |
| 32 | TRISSOCLADIUS SP | 2.6 |
| 33 | ABLABESMYIA SP. | .1 |
| 34 | SIMULIUM SP. | 4.6 |
| 35 | FERRISSIA SP. | .3 |
| 36 | LYMNAEA SP. | .5 |
| 37 | OLIGOCHAETA LUMB | 0 |
| 38 | CAUDATELLA HYSTR | 0 |

DIVERSITY INDEX 3.24

SAMPLE: 25-53C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | RHITHROGENA HAGE | .1 |
| 2 | STENONEMA SP. | 2.2 |
| 3 | CHEUMATOPSYCHE | 1.2 |
| 4 | HYDROPSYCHE OCCI | .2 |
| 5 | HYDROPTILA SP. | 1.4 |
| 6 | CERACLEA SP. | .3 |
| 7 | PSYCHOMYIA FLAVI | .4 |
| 8 | DICROTENDIP SP.A | .9 |
| 9 | MICROPSECTR SP.A | 4.1 |
| 10 | MICROTENDIPES SP | 1.2 |
| 11 | PHAENOPSECTRA SP | .1 |
| 12 | DIAMESA SP. B | .9 |
| 13 | PAGASTIA SP. | .3 |
| 14 | CRICOTOPUS SP. B | 26.5 |
| 15 | EUKIEFFERIELLA A | .1 |
| 16 | EUKIEFFERIELLA B | .1 |
| 17 | EUKIEFFERIELLA E | .1 |
| 18 | HETEROTRISSOCLAD | .1 |
| 19 | ORTHOCLADIUS (EU | 3.1 |
| 20 | ORTHOCLADIUS OBU | 53.5 |
| 21 | SYNORTHOCLADIUS | .2 |
| 22 | TRISSOCLADIUS SP | 1.8 |
| 23 | ABLABESMYIA SP. | .1 |
| 24 | WIEDEMANNIA SP. | .1 |
| 25 | SIMULIUM SP. | .3 |
| 26 | GYRAULUS SP. | .5 |
| 27 | LYMNAEA SP. | .2 |
| 28 | OLIGOCHAETA | .1 |
| 29 | OLIGOCHAETA LUMB | .2 |

DIVERSITY INDEX 2.21

Table 17. Continued

SAMPLE: 27-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS TRICAUDAT | .2 |
| 2 | EPHEMERELLA INFR | .2 |
| 3 | HEPTAGENIA SOLIT | 2.8 |
| 4 | RHITHROGENA HAGE | .1 |
| 5 | STENONEMA SP. | 21.3 |
| 6 | PROSTOIA BESAMET | .1 |
| 7 | PTERONARCYS CALI | .1 |
| 8 | TAENIONEMA PACIF | .3 |
| 9 | OPHIOGOMPHUS SP. | .7 |
| 10 | CHEUMATOPSYCHE | 3.5 |
| 11 | HYDROPSYCHE SP.A | .9 |
| 12 | HYDROPSYCHE OCCI | .3 |
| 13 | SYMPHITOPS COCKE | .5 |
| 14 | HYDROPTILA SP. | 3.7 |
| 15 | CERACLEA SP. | 1.2 |
| 16 | POLYCENTROPUS SP | .1 |
| 17 | PSYCHOMYIA FLAVI | .8 |
| 18 | PARARGYRACTIS SP | .5 |
| 19 | DUBIRAPHIA SP. | .1 |
| 20 | ZAITZEVIA PARVUL | .1 |
| 21 | DICROTENDIP SP.A | 4.6 |
| 22 | DICROTENDIP SP.C | .2 |
| 23 | MICROPSECTR SP.A | .4 |
| 24 | MICROPSECTR SP.C | .1 |
| 25 | MICROTENDIPES SP | 3.4 |
| 26 | PARATANYTARSUS | .1 |
| 27 | TANYTARSUS SP. B | 3.8 |
| 28 | XENOCHIRONOMUS | .1 |
| 29 | DIAMESA SP. A | .1 |
| 30 | DIAMESA SP. B | 2.2 |
| 31 | PAGASTIA SP. | 1.7 |
| 32 | CRICOTOPUS SP. B | 11.5 |
| 33 | EUKIEFFERIELLA A | .7 |
| 34 | EUKIEFFERIELLA B | 1 |
| 35 | EUKIEFFERIELLA E | .3 |
| 36 | EUKIEFFERIELLA F | .1 |
| 37 | HETEROTRISSOCLAD | .1 |
| 38 | ORTHOCLADIUS (EU | 3.4 |
| 39 | ORTHOCLADIUS B | .2 |
| 40 | ORTHOCLADIUS MAL | .9 |
| 41 | ORTHOCLADIUS OBU | 16.9 |
| 42 | TRISSOCLADIUS SP | 1.9 |
| 43 | ABLABESMYIA SP. | .1 |
| 44 | WIEDEMANNIA SP. | .3 |
| 45 | SIMULIUM SP. | 8.3 |
| 46 | PACIFASTICUS SP. | .2 |

DIVERSITY INDEX 3.94

SAMPLE: 31-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHEUMATOPSYCHE | 2 |
| 2 | HYDROPTILA SP. | 21.6 |
| 3 | DICROTENDIP SP.A | 2 |
| 4 | MICROTENDIPES SP | 2 |
| 5 | DIAMESA SP. B | 2 |
| 6 | CRICOTOPUS SP. B | 5.9 |
| 7 | EUKIEFFERIELLA B | 9.8 |
| 8 | EUKIEFFERIELLA E | 2 |
| 9 | ORTHOCLADIUS OBU | 27.5 |
| 10 | HYALELLA AZTECA | 2 |
| 11 | GYRAULUS SP. | 21.6 |
| 12 | LYMNAEA SP. | 2 |

DIVERSITY INDEX 2.81

Table 17. Deep Water Monitoring Stations - Petite Ponar Grab Samples

SAMPLE: 3-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. | 64.9 |
| 2 | TANYTARSUS SP. C | 2.7 |
| 3 | DIAMESA SP. B | 2.7 |
| 4 | MONODIAMESA SP. | 2.7 |
| 5 | EUKIEFFERIELLA B | 2.7 |
| 6 | ORTHOCLADIUS E | 2.7 |
| 7 | ORTHOCLADIUS OBU | 2.7 |
| 8 | OLIGOCHAETA | 18.9 |

DIVERSITY INDEX 1.7

SAMPLE: 26-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. | 2 |
| 2 | CRYPTOCHIRONOMUS | .9 |
| 3 | PARALAUTERBORNIE | 1.3 |
| 4 | PHAENOPSECTRA SP | 1.3 |
| 5 | POLYPEDILUM SP.B | 2 |
| 6 | TANYTARSUS SP. C | 5.5 |
| 7 | DIAMESA SP. B | .2 |
| 8 | ORTHOCLADIUS E | .4 |
| 9 | ORTHOCLADIUS OBU | .9 |
| 10 | TRISSOCLADIUS SP | .9 |
| 11 | PROCLADIUS SP. A | 27.1 |
| 12 | OLIGOCHAETA | 57.6 |

DIVERSITY INDEX 1.82

SAMPLE: 28A-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. | 14.1 |
| 2 | PROCLADIUS SP. A | 51.3 |
| 3 | OLIGOCHAETA | 34.6 |

DIVERSITY INDEX 1.42

SAMPLE: 28B-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. | 77.1 |
| 2 | PROCLADIUS SP. A | 10.8 |
| 3 | OLIGOCHAETA | 12 |

DIVERSITY INDEX 1

SAMPLE: 30-53C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | ORTHOCLADIUS OBU | 100 |

DIVERSITY INDEX 0

Table 17. Benthic Macroinvertebrate Sample Percentage Distribution and Diversity Data, Summer 1985.

SAMPLE: 1-57-C Shallow Water Monitoring Stations - Kick Samples

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .2 |
| 2 | BAETIS INSIGNIFI | 10.4 |
| 3 | BAETIS TRICAUDAT | 7.2 |
| 4 | ATTENELLA MARGAR | 3.6 |
| 5 | DRUNELLA GRANDIS | 1.3 |
| 6 | SERRATELLA TIBIA | 2.4 |
| 7 | TIMPANOGA HECUBA | .1 |
| 8 | EPEORUS ALBERTAE | .1 |
| 9 | NIXE CRIDDLEI | .1 |
| 10 | NIXE SIMPLICIOID | .4 |
| 11 | RHITHROGENA HAGE | 2.6 |
| 12 | PARALEPTOPHL DEB | .2 |
| 13 | TRICORYTHODES MI | 1.5 |
| 14 | ALLOPERLA-GROUP | .3 |
| 15 | ZAPADA CINCTIPES | .1 |
| 16 | CLAASSENI SABULO | .5 |
| 17 | ISOGENOIDES ELON | .6 |
| 18 | ISOPERLA QUINQUE | .1 |
| 19 | SKWALA PARALLELA | .5 |
| 20 | PTERONARCELLA BA | 2.3 |
| 21 | PTERONARCYS CALI | .2 |
| 22 | BRACHYCENTRUS OC | .1 |
| 23 | ARCTOPSYCHE GRAN | 3.3 |
| 24 | CHEUMATOPSYCHE | 2.5 |
| 25 | HYDROPSYCHE OCCI | 18.3 |
| 26 | SYMPHITOPS COCKE | 13.2 |
| 27 | HYDROPTILA SP. | .8 |
| 28 | NEOTRICHIA SP. | .4 |
| 29 | OECETIS SP. A | .1 |
| 30 | OPTIOSERVUS SPP. | 2.5 |
| 31 | ZAITZEVIA PARVUL | 4.3 |
| 32 | ATHERIX VARIEGAT | 1.7 |
| 33 | MICROPSECTR SP.A | .2 |
| 34 | MICROPSECTR SP.C | .8 |
| 35 | MICROTENDIPES SP | .2 |
| 36 | POLYPEDILUM SP.A | 6.2 |
| 37 | TANYTARSUS SP. C | 1 |
| 38 | PAGASTIA SP. | .2 |
| 39 | EUKIEFFERIELLA A | .2 |
| 40 | EUKIEFFERIELLA B | 1.3 |
| 41 | EUKIEFFERIELLA E | 2.2 |
| 42 | EUKIEFFERIELLA G | .2 |
| 43 | HETEROTRISSOCLAD | .1 |
| 44 | ORTHOCLADIUS B | .7 |
| 45 | ORTHOCLADIUS MAL | .6 |
| 46 | ORTHOCLADIUS NIG | .1 |
| 47 | ORTHOCLADIUS OBU | .6 |
| 48 | PSECTROCLADIUS B | .2 |
| 49 | SYNORTHOCLADIUS | .1 |
| 50 | ABLABESMYIA SP. | .2 |
| 51 | CHELIFERA SP. | .2 |
| 52 | SIMULIUM SP. | .8 |
| 53 | PROTANYDERUS SP. | .1 |
| 54 | ANTOCHA SP. | .1 |
| 55 | HEXATOMA SP. | 1.8 |
| 56 | OLIGOCHAETA | .1 |

DIVERSITY INDEX 4.35

Table 17. Continued

SAMPLE: 2-57-C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | 1.3 |
| 2 | BAETIS INSIGNIFI | 4 |
| 3 | BAETIS TRICAUDAT | 2.4 |
| 4 | ATTENELLA MARGAR | .1 |
| 5 | DRUNELLA DODDSI | .6 |
| 6 | DRUNELLA GRANDIS | .4 |
| 7 | EPHEMERELLA INFR | .1 |
| 8 | SERRATELLA TIBIA | 6.1 |
| 9 | EPEORUS ALBERTAE | .8 |
| 10 | NIXE CRIDDLEI | .1 |
| 11 | RHITHROGENA HAGE | .6 |
| 12 | ALLOPERLA-GROUP | .3 |
| 13 | CALINEURIA CALIF | 1.4 |
| 14 | CLAASSENI SABULO | 1.5 |
| 15 | SKWALA PARALELA | .2 |
| 16 | PTERONARCYS CALI | .5 |
| 17 | ARCTOPSYCHE GRAN | 1.2 |
| 18 | CHEUMATOPSYCHE | 4.9 |
| 19 | HYDROPSYCHE OCCI | 4.2 |
| 20 | SYMPHITOPS COCKE | 3.7 |
| 21 | HYDROPTILA SP. | .1 |
| 22 | LEUCOTRICHIA PIC | .2 |
| 23 | NEOTRICHIA SP. | .3 |
| 24 | LEPIDOSTOMA SP.A | .1 |
| 25 | OECETIS SP. A | .1 |
| 26 | DICOSMOECUS SP. | .3 |
| 27 | WORMALDIA SP. | 1.2 |
| 28 | PSYCHOMYIA FLAVI | .1 |
| 29 | RHYACOPHILA ANGE | .1 |
| 30 | OPTIOSERVUS SPP. | 4.1 |
| 31 | ZAITZEVIA PARVUL | 7.4 |
| 32 | PALPOMY-GP SP. A | .1 |
| 33 | MICROPSECTR SP.A | .1 |
| 34 | MICROPSECTR SP.C | 38.8 |
| 35 | MICROTENDIPES SP | 1.1 |
| 36 | PHAENOPSECTRA SP | .1 |
| 37 | POLYPEDILUM SP.A | 2.3 |
| 38 | TANYTARSUS SP. C | .7 |
| 39 | EUKIEFFERIELLA A | .4 |
| 40 | EUKIEFFERIELLA B | .3 |
| 41 | EUKIEFFERIELLA E | .6 |
| 42 | HETEROTRISSOCLAD | .1 |
| 43 | ORTHOCLADIUS B | .1 |
| 44 | ORTHOCLADIUS MAL | .4 |
| 45 | ORTHOCLADIUS OBU | .3 |
| 46 | THIENEMANIELL SP | .1 |
| 47 | ABLABESMYIA SP. | .1 |
| 48 | CHELIFERA SP. | .1 |
| 49 | SIMULIUM SP. | .2 |
| 50 | ANTOCHA SP. | .4 |
| 51 | HEXATOMA SP. | 1.7 |
| 52 | PHYSA SP. | 3.5 |
| 53 | OLIGOCHAETA LUMB | .5 |
| 54 | STELENMIS SP. | .1 |

DIVERSITY INDEX 3.76

SAMPLE: 4-57-C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .6 |
| 2 | BAETIS INSIGNIFI | 3.6 |
| 3 | BAETIS TRICAUDAT | 11.3 |
| 4 | ATTENELLA MARGAR | .6 |
| 5 | DRUNELLA DODDSI | .5 |
| 6 | DRUNELLA GRANDIS | .3 |
| 7 | SERRATELLA TIBIA | 4.5 |
| 8 | TIMPANOGA HECUBA | .1 |
| 9 | EPEORUS ALBERTAE | .6 |
| 10 | NIXE CRIDDLEI | .1 |
| 11 | RHITHROGENA HAGE | .5 |
| 12 | TRICORYTHODES MI | .3 |
| 13 | CLAASSENI SABULO | .4 |
| 14 | HESPEROPERLA PAC | .4 |
| 15 | ISOGENOIDES ELON | .3 |
| 16 | SKWALA PARALLELA | .2 |
| 17 | PTERONARCELLA BA | .7 |
| 18 | PTERONARCYS CALI | 1.4 |
| 19 | BRACHYCENTRUS OC | .1 |
| 20 | ARCTOPSYCHE GRAN | .9 |
| 21 | CHEUMATOPSYCHE | 14.5 |
| 22 | HYDROPSYCHE OCCI | 4.5 |
| 23 | SYMPHITOPS COCKE | 16.8 |
| 24 | SYMPHITOPS SLOSS | .1 |
| 25 | HYDROPTILA SP. | 3.8 |
| 26 | NEOTRICHIA SP. | .3 |
| 27 | WORMALDIA SP. | .9 |
| 28 | PSYCHOMYIA FLAVI | 1.8 |
| 29 | PARARGYRACTIS SP | .2 |
| 30 | OPTIOSERVUS SPP. | 2.1 |
| 31 | ZAITZEVIA PARVUL | 4.1 |
| 32 | CRYPTOCHIRONOMUS | .1 |
| 33 | MICROPSECTR SP.A | .2 |
| 34 | MICROPSECTR SP.C | 3.5 |
| 35 | MICROTENDIPES SP | .3 |
| 36 | POLYPEDILUM SP.A | 7.4 |
| 37 | TANYTARSUS SP. C | .2 |
| 38 | PAGASTIA SP. | .3 |
| 39 | CRICOTOPUS SP. B | .1 |
| 40 | EUKIEFFERIELLA A | .1 |
| 41 | EUKIEFFERIELLA B | 4.4 |
| 42 | EUKIEFFERIELLA E | .3 |
| 43 | EUKIEFFERIELLA G | .2 |
| 44 | ORTHOCLADIUS B | 1.8 |
| 45 | ORTHOCLADIUS MAL | 2.2 |
| 46 | ORTHOCLADIUS NIG | .1 |
| 47 | ORTHOCLADIUS OBU | .7 |
| 48 | SIMULIUM SP. | .6 |
| 49 | ANTOCHA SP. | .9 |
| 50 | OLIGOCHAETA | .1 |
| 51 | TURBELLARI | .2 |

DIVERSITY INDEX 4.27

SAMPLE 5-57-C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .3 |
| 2 | BAETIS INSIGNIFI | 9.8 |
| 3 | BAETIS TRICAUDAT | 8 |
| 4 | DRUNELLA GRANDIS | .2 |
| 5 | EPHEMERELLA INFR | .1 |
| 6 | SERRATELLA TIBIA | 2.7 |
| 7 | TIMPANOGA HECUBA | .1 |
| 8 | EPEORUS ALBERTAE | .3 |
| 9 | HEPTAGENIA SOLIT | .1 |
| 10 | RHITHROGENA HAGE | .5 |
| 11 | TRICORYTHODES MI | .3 |
| 12 | CLAASSENI SABULO | .4 |
| 13 | HESPEROPERLA PAC | .1 |
| 14 | ISOGENOIDES ELON | .2 |
| 15 | SKWALA PARALLELA | .5 |
| 16 | PTERONARCYS CALI | .1 |
| 17 | RHAGOVELIA SP. | .2 |
| 18 | ARCTOPSYCHE GRAN | .7 |
| 19 | CHEUMATOPSYCHE | 22.5 |
| 20 | HYDROPSYCHE OCCI | 6.5 |
| 21 | SYMPHITOPS COCKE | 27.3 |
| 22 | HYDROPTILA SP. | .1 |
| 23 | WORMALDIA SP. | .1 |
| 24 | PSYCHOMYIA FLAVI | .7 |
| 25 | PARARGYRACTIS SP | .1 |
| 26 | OPTIOSERVUS SPP. | 1 |
| 27 | ZAITZEVIA PARVUL | 4.1 |
| 28 | MICROPSECTR SP.A | .1 |
| 29 | MICROPSECTR SP.C | 2.4 |
| 30 | POLYPEDILUM SP.A | 2.2 |
| 31 | CRICOTOPUS SP. B | .1 |
| 32 | EUKIEFFERIELLA B | 1.9 |
| 33 | EUKIEFFERIELLA E | .4 |
| 34 | ORTHOCLADIUS B | 1 |
| 35 | ORTHOCLADIUS OBU | .1 |
| 36 | CHELIFERA SP. | .1 |
| 37 | SIMULIUM SP. | 4.1 |
| 38 | HEXATOMA SP. | .5 |

DIVERSITY INDEX 3.41

Table 17. Continued

SAMPLE: 6-57-C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .8 |
| 2 | BAETIS INSIGNIFI | 15.9 |
| 3 | BAETIS TRICAUDAT | 5.8 |
| 4 | CENTROPTILU SP.A | .7 |
| 5 | ATTENELLA MARGAR | 1.1 |
| 6 | EPHEMERELLA INFR | .3 |
| 7 | SERRATELLA TIBIA | 3.4 |
| 8 | TIMPANOGA HECUBA | .3 |
| 9 | EPEORUS ALBERTAE | .7 |
| 10 | HEPTAGENIA SOLIT | .9 |
| 11 | NIXE CRIDDLEI | .3 |
| 12 | NIXE SIMPLICIOID | .9 |
| 13 | RHITHROGENA HAGE | .5 |
| 14 | PARALEPTOPHL BIC | .5 |
| 15 | PARALEPTOPHL DEB | .3 |
| 16 | TRICORYTHODES MI | 3.7 |
| 17 | CLAASSENI SABULO | .1 |
| 18 | HESPEROPERLA PAC | .1 |
| 19 | ISOGENOIDES ELON | .5 |
| 20 | SKWALA PARALLELA | .7 |
| 21 | PTERONARCELLA BA | .1 |
| 22 | PTERONARCYS CALI | .1 |
| 23 | BRACHYCENTRUS OC | .1 |
| 24 | PROTOPTILA SP. | .1 |
| 25 | ARCTOPSYCHE GRAN | .7 |
| 26 | CHEUMATOPSYCHE | 22.5 |
| 27 | HYDROPSYCHE OCCI | 3.9 |
| 28 | SYMPHITOPS COCKE | 16.5 |
| 29 | HYDROPTILA SP. | .6 |
| 30 | ZUMATRICHIA NOTO | .1 |
| 31 | OECETIS SP. A | .3 |
| 32 | PSYCHOMYIA FLAVI | 2 |
| 33 | PARARGYRACTIS SP | .1 |
| 34 | NARPUS CONCOLOR | .1 |
| 35 | OPTIOSERVUS SPP. | .5 |
| 36 | ZAITZEVIA PARVUL | 2.3 |
| 37 | ATHERIX VARIEGAT | .1 |
| 38 | MICROPSECTR SP.A | .3 |
| 39 | MICROPSECTR SP.C | 1 |
| 40 | MICROTENDIPES SP | .4 |
| 41 | PHAENOPSECTRA SP | .2 |
| 42 | POLYPEDILUM SP.A | 4.5 |
| 43 | TANYTARSUS SP. C | .3 |
| 44 | PAGASTIA SP. | .1 |
| 45 | CORYNONEURA SP. | .1 |
| 46 | EUKIEFFERIELLA A | .1 |
| 47 | EUKIEFFERIELLA B | .3 |
| 48 | EUKIEFFERIELLA E | 1.2 |
| 49 | ORTHOCLADIUS B | 1.1 |
| 50 | ORTHOCLADIUS MAL | .1 |
| 51 | ORTHOCLADIUS OBU | .7 |

Table 17. Continued

| | | |
|---|---|---|
| 52 | PSECTROCLADIUS B | .3 |
| 53 | SYNORTHOCLADIUS | .4 |
| 54 | THIENEMANIELL SP | .1 |
| 55 | ABLABESMYIA SP. | .1 |
| 56 | CHELIFERA SP. | .1 |
| 57 | SIMULIUM SP. | .3 |
| 58 | PROTANYDERUS SP. | .1 |
| 59 | ANTOCHA SP. | .2 |
| 60 | HEXATOMA SP. | .4 |
| 61 | PACIFASTICUS SP. | .1 |

DIVERSITY INDEX 4.01

SAMPLE: B-57-C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | 1.9 |
| 2 | BAETIS INSIGNIFI | 5.7 |
| 3 | BAETIS TRICAUDAT | 6.3 |
| 4 | CENTROPTILU SP.A | .3 |
| 5 | ATTENELLA MARGAR | .1 |
| 6 | DRUNELLA DODDSI | .1 |
| 7 | DRUNELLA GRANDIS | .1 |
| 8 | EPHEMERELLA INFR | .1 |
| 9 | SERRATELLA TIBIA | .6 |
| 10 | TIMPANOGA HECUBA | .3 |
| 11 | EPEORUS ALBERTAE | .2 |
| 12 | HEPTAGENIA SOLIT | .1 |
| 13 | NIXE CRIDDLEI | .1 |
| 14 | NIXE SIMPLICIOID | .6 |
| 15 | PARALEPTOPHL BIC | .2 |
| 16 | PARALEPTOPHL DEB | .2 |
| 17 | TRICORYTHODES MI | 3.1 |
| 18 | MALENKA SP. | .1 |
| 19 | CLAASSENI SABULO | .1 |
| 20 | HESPEROPERLA PAC | .2 |
| 21 | ISOGENOIDES ELON | .6 |
| 22 | SKWALA PARALLELA | .6 |
| 23 | PTERONARCELLA BA | .1 |
| 24 | PTERONARCYS CALI | .2 |
| 25 | BRACHYCENTRUS OC | .2 |
| 26 | ARCTOPSYCHE GRAN | 2.2 |
| 27 | CHEUMATOPSYCHE | 23.4 |
| 28 | HYDROPSYCHE OCCI | 5 |
| 29 | SYMPHITOPS COCKE | 21 |
| 30 | HYDROPTILA SP. | 1 |
| 31 | ZUMATRICHIA NOTO | .1 |
| 32 | WORMALDIA SP. | .2 |
| 33 | PSYCHOMYIA FLAVI | .9 |
| 34 | PARARGYRACTIS SP | 1.7 |
| 35 | OPTIOSERVUS SPP. | .8 |
| 36 | ZAITZEVIA PARVUL | 1.6 |
| 37 | CHIRONOMUS SP. | 3.1 |
| 38 | MICROPSECTR SP.C | .2 |
| 39 | PHAENOPSECTRA SP | .1 |
| 40 | POLYPEDILUM SP.A | 7.1 |
| 41 | TANYTARSUS SP. A | .1 |
| 42 | TANYTARSUS SP. C | .1 |
| 43 | PAGASTIA SP. | .1 |
| 44 | CRICOTOPUS SP. B | .9 |
| 45 | EUKIEFFERIELLA A | .4 |
| 46 | EUKIEFFERIELLA B | 2.5 |
| 47 | EUKIEFFERIELLA E | .8 |

Table 17. Continued

| | | |
|---|---|---|
| 48 | EUKIEFFERIELLA F | .1 |
| 49 | EUKIEFFERIELLA G | .1 |
| 50 | ORTHOCLADIUS B | 1.6 |
| 51 | ORTHOCLADIUS MAL | 1.2 |
| 52 | ORTHOCLADIUS NIG | .1 |
| 53 | ORTHOCLADIUS OBU | .4 |
| 54 | PSECTROCLADIUS C | .1 |
| 55 | SYNORTHOCLADIUS | .1 |
| 56 | CHELIFERA SP. | .1 |
| 57 | SIMULIUM SP. | .3 |
| 58 | ANTOCHA SP. | .2 |
| 59 | PHYSA SP. | .1 |
| 60 | OLIGOCHAETA | .9 |

DIVERSITY INDEX 3.97

SAMPLE 9-57-C

SPECIES [illegible]

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | 1.7 |
| 2 | BAETIS INSIGNIFI | 5.2 |
| 3 | BAETIS TRICAUDAT | 1.4 |
| 4 | CENTROPTILU SP.A | .1 |
| 5 | ATTENELLA MARGAR | 1.7 |
| 6 | EPHEMERELLA INFR | 1.2 |
| 7 | SERRATELLA TIBIA | .6 |
| 8 | TIMPANOGA HECUBA | .7 |
| 9 | EPEORUS ALBERTAE | [illegible] |
| 10 | HEPTAGENIA SOLIT | 1.2 |
| 11 | NIXE CRIDDLEI | .1 |
| 12 | NIXE SIMPLICIOID | 1 |
| 13 | RHITHROGENA HAGE | .9 |
| 14 | PARALEPTOPHL BIC | 1.1 |
| 15 | PARALEPTOPHL DEB | .3 |
| 16 | TRICORYTHODES MI | 9.1 |
| 17 | CLAASSENI SABULO | .1 |
| 18 | HESPEROPERLA PAC | .4 |
| 19 | ISOGENOIDES ELON | 2.2 |
| 20 | ISOPERLA QUINQUE | .1 |
| 21 | SKWALA PARALLELA | 1.3 |
| 22 | PTERONARCYS CALI | .1 |
| 23 | BRACHYCENTRUS OC | .1 |
| 24 | ARCTOPSYCHE GRAN | .3 |
| 25 | CHEUMATOPSYCHE | 21 |
| 26 | HYDROPSYCHE OCCI | 5.1 |
| 27 | SYMPHITOPS COCKE | 9.4 |
| 28 | HYDROPTILA SP. | 3.6 |
| 29 | NECTRICHIA SP. | .2 |
| 30 | ZUMATRICHIA NOTO | .1 |
| 31 | OECETIS SP. A | .8 |
| 32 | WORMALDIA SP. | .1 |
| 33 | PSYCHOMYIA FLAVI | 2.4 |
| 34 | PARARGYRACTIS SP | 2.6 |
| 35 | OREODYTES SCITIL | .3 |
| 36 | OPTIOSERVUS SPP. | .8 |
| 37 | ZAITZEVIA PARVUL | 3.3 |
| 38 | CHIRONOMUS SP. | .1 |
| 39 | MICROPSECTR SP.A | .2 |
| 40 | MICROPSECTR SP.C | .7 |
| 41 | MICROTENDIPES SP | .6 |
| 42 | PHAENOPSECTRA SP | .4 |
| 43 | POLYPEDILUM SP.A | 7.2 |
| 44 | TANYTARSUS SP. C | .8 |
| 45 | PAGASTIA SP. | .2 |
| 46 | CRICOTOPUS SP. B | .3 |
| 47 | EUKIEFFERIELLA A | .1 |
| 48 | EUKIEFFERIELLA B | .6 |
| 49 | EUKIEFFERIELLA E | .4 |
| 50 | EUKIEFFERIELLA C | .1 |

Table 17. Continued

| | | |
|---|---|---|
| 51 | ORTHOCLADIUS B | 4.4 |
| 52 | ORTHOCLADIUS MAL | .9 |
| 53 | ORTHOCLADIUS NIG | .1 |
| 54 | ORTHOCLADIUS OBU | .3 |
| 55 | PSECTROCLADIUS B | .4 |
| 56 | PSECTROCLADIUS C | .2 |
| 57 | ABLABESMYIA SP. | .4 |
| 58 | CHELIFERA SP. | .3 |
| 59 | WIEDEMANNIA SP. | .1 |
| 60 | ANTOCHA SP. | .2 |
| 61 | HEXATOMA SP. | .1 |
| 62 | HYDROCHUS SP. | .3 |

DIVERSITY INDEX 4.49

Table 17. Continued

SAMPLE: 10-57-C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .1 |
| 2 | BAETIS INSIGNIFI | 7.5 |
| 3 | BAETIS TRICAUDAT | 7.8 |
| 4 | ATTENELLA MARGAR | 3.8 |
| 5 | DRUNELLA GRANDIS | 2.5 |
| 6 | EPHEMERELLA INFR | .1 |
| 7 | SERRATELLA TIBIA | 3.6 |
| 8 | EPEORUS ALBERTAE | .1 |
| 9 | NIXE CRIDDLEI | .1 |
| 10 | NIXE SIMPLICIOID | .1 |
| 11 | RHITHROGENA HAGE | 4.3 |
| 12 | PARALEPTOPHL BIC | .1 |
| 13 | PARALEPTOPHL DEB | .1 |
| 14 | TRICORYTHODES MI | 1.1 |
| 15 | CLAASSENI SABULO | 1.4 |
| 16 | ISOGENOIDES ELON | .7 |
| 17 | SKWALA PARALLELA | 1.3 |
| 18 | PTERONARCELLA BA | 4.4 |
| 19 | BRACHYCENTRUS OC | .4 |
| 20 | PROTOPTILA SP. | .1 |
| 21 | ARCTOPSYCHE GRAN | 1.2 |
| 22 | CHEUMATOPSYCHE | 5.8 |
| 23 | HYDROPSYCHE OCCI | 4.8 |
| 24 | SYMPHITOPS COCKE | 5 |
| 25 | HYDROPTILA SP. | .9 |
| 26 | NEOTRICHIA SP. | .3 |
| 27 | ZUMATRICHIA NOTO | .1 |
| 28 | PARARGYRACTIS SP | .2 |
| 29 | OPTIOSERVUS SPP. | 9.5 |
| 30 | ZAITZEVIA PARVUL | 6.7 |
| 31 | ATHERIX VARIEGAT | .1 |
| 32 | MICROPSECTR SP.A | 2.5 |
| 33 | MICROPSECTR SP.C | 1.6 |
| 34 | MICROTENDIPES SP | .1 |
| 35 | POLYPEDILUM SP.A | 6.1 |
| 36 | PAGASTIA SP. | .1 |
| 37 | POTTHASTIA SP. | .1 |
| 38 | EUKIEFFERIELLA A | .1 |
| 39 | EUKIEFFERIELLA B | 1.4 |
| 40 | EUKIEFFERIELLA E | 1.2 |
| 41 | EUKIEFFERIELLA G | .1 |
| 42 | ORTHOCLADIUS B | .1 |
| 43 | ORTHOCLADIUS MAL | .3 |
| 44 | ORTHOCLADIUS NIG | .1 |
| 45 | ORTHOCLADIUS OBU | .1 |
| 46 | PSECTROCLADIUS B | .1 |
| 47 | SYNORTHOCLADIUS | .1 |
| 48 | THIENEMANIELL SP | .2 |
| 49 | ABLABESMYIA SP. | .4 |
| 50 | CHELIFERA SP. | .3 |
| 51 | SIMULIUM SP. | 9.6 |
| 52 | ANTOCHA SP. | .1 |
| 53 | OLIGOCHAETA | .1 |
| 54 | OLIGOCHAETA LUMB | .4 |
| 55 | TURBELLARI | .2 |

DIVERSITY INDEX 4.55

Table 17. Continued

SAMPLE: 11-57-C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .3 |
| 2 | BAETIS INSIGNIFI | 25 |
| 3 | BAETIS TRICAUDAT | 9.7 |
| 4 | ATTENELLA MARGAR | 1.5 |
| 5 | DRUNELLA GRANDIS | .2 |
| 6 | SERRATELLA TIBIA | 1.4 |
| 7 | TIMPANOGA HECUBA | 0 |
| 8 | HEPTAGENIA SOLIT | 0 |
| 9 | NIXE SIMPLICIOID | .2 |
| 10 | RHITHROGENA HAGE | 3.9 |
| 11 | PARALEPTOPHL DEB | .1 |
| 12 | TRICORYTHODES MI | .7 |
| 13 | CALINEURIA CALIF | .1 |
| 14 | CLAASSENI SABULO | .9 |
| 15 | ISOGENOIDES ELON | .1 |
| 16 | SKWALA PARALLELA | .1 |
| 17 | PTERONARCELLA BA | 1.7 |
| 18 | PTERONARCYS CALI | .1 |
| 19 | BRACHYCENTRUS OC | .1 |
| 20 | ARCTOPSYCHE GRAN | 2.1 |
| 21 | CHEUMATOPSYCHE | 6.1 |
| 22 | HYDROPSYCHE OCCI | 16 |
| 23 | SYMPHITOPS COCKE | 1.7 |
| 24 | HYDROPTILA SP. | 0 |
| 25 | ZUMATRICHIA NOTO | 0 |
| 26 | OECETIS SP. A | .1 |
| 27 | OPTIOSERVUS SPP. | 1.4 |
| 28 | ZAITZEVIA PARVUL | 2 |
| 29 | ATHERIX VARIEGAT | 3.2 |
| 30 | MICROPSECTR SP.A | 1.4 |
| 31 | MICROPSECTR SP.C | 2.1 |
| 32 | MICROTENDIPES SP | .2 |
| 33 | PHAENOPSECTRA SP | 1.6 |
| 34 | POLYPEDILUM SP.A | 3 |
| 35 | TANYTARSUS SP. C | .8 |
| 36 | EUKIEFFERIELLA A | 0 |
| 37 | EUKIEFFERIELLA B | .6 |
| 38 | EUKIEFFERIELLA E | .4 |
| 39 | HETEROTRISSOCLAD | .1 |
| 40 | ORTHOCLADIUS MAL | .2 |
| 41 | ORTHOCLADIUS OBU | .3 |
| 42 | PSECTROCLADIUS B | .1 |
| 43 | ABLABESMYIA SP. | .5 |
| 44 | CHELIFERA SP. | .1 |
| 45 | SIMULIUM SP. | 7.6 |
| 46 | PROTANYDERUS SP. | .1 |
| 47 | HEXATOMA SP. | 1.8 |

DIVERSITY INDEX 3.91

Table 17. Continued

SAMPLE: 13-57-C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .2 |
| 2 | BAETIS INSIGNIFI | 14.5 |
| 3 | BAETIS TRICAUDAT | 4.8 |
| 4 | CENTROPTILU SP.A | .3 |
| 5 | ATTENELLA MARGAR | 8.5 |
| 6 | DRUNELLA GRANDIS | .1 |
| 7 | EPHEMERELLA INFR | .1 |
| 8 | SERRATELLA TIBIA | .6 |
| 9 | HEPTAGENIA SOLIT | .5 |
| 10 | NIXE SIMPLICIOID | 5.5 |
| 11 | RHITHROGENA HAGE | 2.2 |
| 12 | PARALEPTOPHL BIC | .1 |
| 13 | PARALEPTOPHL DEB | .1 |
| 14 | TRICORYTHODES MI | 3.5 |
| 15 | CALINEURIA CALIF | .1 |
| 16 | CLAASSENI SABULO | 1 |
| 17 | ISOGENOIDES ELON | 3 |
| 18 | ISOPERLA QUINQUE | .1 |
| 19 | SKWALA PARALLELA | 1.1 |
| 20 | PTERONARCELLA BA | .3 |
| 21 | PTERONARCYS CALI | .2 |
| 22 | SIGARA SP. | .1 |
| 23 | BRACHYCENTRUS OC | .3 |
| 24 | ARCTOPSYCHE GRAN | 1.2 |
| 25 | CHEUMATOPSYCHE | 9.7 |
| 26 | HYDROPSYCHE OCCI | 10.8 |
| 27 | SYMPHITOPS COCKE | 5.1 |
| 28 | HYDROPTILA SP. | 1.2 |
| 29 | ZUMATRICHIA NOTO | .1 |
| 30 | CERACLEA SP. | .1 |
| 31 | OECETIS SP. A | .8 |
| 32 | PSYCHOMYIA FLAVI | .1 |
| 33 | OREODYTES SCITIL | .1 |
| 34 | OPTIOSERVUS SPP. | 1.7 |
| 35 | ZAITZEVIA PARVUL | 2.2 |
| 36 | ATHERIX VARIEGAT | .7 |
| 37 | DICROTENDIP SP.C | .1 |
| 38 | MICROPSECTR SP.A | 3.4 |
| 39 | MICROPSECTR SP.C | .8 |
| 40 | MICROTENDIPES SP | 1.7 |
| 41 | PHAENOPSECTRA SP | 1 |
| 42 | POLYPEDILUM SP.A | 3.5 |
| 43 | XENOCHIRONOMUS | .1 |
| 44 | TANYTARSUS SP. C | .8 |
| 45 | CORYNONEURA SP. | .1 |
| 46 | CRICOTOPUS SP. B | .1 |
| 47 | EUKIEFFERIELLA B | 1.7 |
| 48 | EUKIEFFERIELLA E | .7 |
| 49 | HETEROTRISSOCLAD | .1 |
| 50 | ORTHOCLADIUS B | .5 |
| 51 | ORTHOCLADIUS MAL | .7 |

Table 17. Continued

| | | |
|---|---|---|
| 52 | ORTHOCLADIUS OBU | .3 |
| 53 | PSECTROCLADIUS B | .5 |
| 54 | SYNORTHOCLADIUS | .1 |
| 55 | ABLABESMYIA SP. | 1.1 |
| 56 | CHELIFERA SP. | .1 |
| 57 | SIMULIUM SP. | .1 |
| 58 | HEXATOMA SP. | 1.2 |
| 59 | OLIGOCHAETA | .1 |
| 60 | OLIGOCHAETA LUMB | .1 |
| 61 | HYDROCHUS SP. | .1 |

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Table 17. Continued

SAMPLE: 14-57-C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .1 |
| 2 | BAETIS INSIGNIFI | 16 |
| 3 | BAETIS TRICAUDAT | 1.5 |
| 4 | CENTROPTILU SP.A | 1 |
| 5 | CAENIS SIMULANS | .2 |
| 6 | ATTENELLA MARGAR | 7.3 |
| 7 | EPHEMERELLA INFR | .1 |
| 8 | SERRATELLA TIBIA | .1 |
| 9 | TIMPANOGA HECUBA | .4 |
| 10 | EPEORUS ALBERTAE | .1 |
| 11 | HEPTAGENIA SOLIT | 1.3 |
| 12 | NIXE CRIDDLEI | .5 |
| 13 | NIXE SIMPLICIOID | 6.8 |
| 14 | RHITHROGENA HAGE | .4 |
| 15 | PARALEPTOPHL BIC | 2.7 |
| 16 | PARALEPTOPHL DEB | .9 |
| 17 | TRICORYTHODES MI | 12.3 |
| 18 | CALINEURIA CALIF | .1 |
| 19 | CLAASSENI SABULO | .9 |
| 20 | ISOGENOIDES ELON | 2.6 |
| 21 | SKWALA PARALLELA | .6 |
| 22 | OPHIOGOMPHUS SP. | .2 |
| 23 | BRACHYCENTRUS OC | .1 |
| 24 | ARCTOPSYCHE GRAN | .1 |
| 25 | CHEUMATOPSYCHE | 5.1 |
| 26 | HYDROPSYCHE OCCI | 1.8 |
| 27 | SYMPHITOPS COCKE | .7 |
| 28 | HYDROPTILA SP. | 3 |
| 29 | ZUMATRICHIA NOTO | .2 |
| 30 | CERACLEA SP. | .1 |
| 31 | OECETIS SP. A | .6 |
| 32 | PSYCHOMYIA FLAVI | .6 |
| 33 | PARARGYRACTIS SP | .2 |
| 34 | OREODYTES SCITIL | .1 |
| 35 | OPTIOSERVUS SPP. | .4 |
| 36 | ZAITZEVIA PARVUL | .7 |
| 37 | BRYCHIUS SP. | .3 |
| 38 | ATHERIX VARIEGAT | .1 |
| 39 | CRYPTOCHIRONOMUS | .1 |
| 40 | MICROPSECTR SP.A | 1.5 |
| 41 | MICROPSECTR SP.C | .9 |
| 42 | MICROTENDIPES SP | 11.2 |
| 43 | PHAENOPSECTRA SP | 2.8 |
| 44 | POLYPEDILUM SP.A | 2.9 |
| 45 | TANYTARSUS SP. C | 1.4 |
| 46 | MONODIAMESA SP. | .1 |
| 47 | CORYNONEURA SP. | .1 |
| 48 | CRICOTOPUS SP. B | .3 |
| 49 | EUKIEFFERIELLA A | .1 |
| 50 | EUKIEFFERIELLA B | .5 |
| 51 | ORTHOCLADIUS B | 1.7 |
| 52 | ORTHOCLADIUS MAL | .1 |

Table 17. Continued

| | | |
|---|---|---|
| 53 | ORTHOCLADIUS NIG | .1 |
| 54 | ORTHOCLADIUS OBU | 1.2 |
| 55 | PSECTROCLADIUS B | .5 |
| 56 | SYNORTHOCLADIUS | .3 |
| 57 | ABLABESMYIA SP. | 1.2 |
| 58 | CHELIFERA SP. | .1 |
| 59 | HEXATOMA SP. | .5 |
| 60 | HYALELLA AZTECA | .1 |
| 61 | LEBERTIA SP. | .1 |
| 62 | OLIGOCHAETA | 2:6 |

DIVERSITY INDEX 4.51

Table 17. Continued

SAMPLE: 15-57-C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .4 |
| 2 | BAETIS INSIGNIFI | 11.5 |
| 3 | BAETIS TRICAUDAT | 5.9 |
| 4 | CENTROPTILU SP.A | .3 |
| 5 | ATTENELLA MARGAR | 5.7 |
| 6 | EPHEMERELLA INFR | .1 |
| 7 | SERRATELLA TIBIA | .6 |
| 8 | TIMPANOGA HECUBA | .1 |
| 9 | EPEORUS ALBERTAE | .1 |
| 10 | HEPTAGENIA SOLIT | .5 |
| 11 | NIXE CRIDDLEI | .4 |
| 12 | NIXE SIMPLICIOID | 5.7 |
| 13 | RHITHROGENA HAGE | 6.1 |
| 14 | PARALEPTOPHL BIC | .7 |
| 15 | PARALEPTOPHL DEB | .2 |
| 16 | AMELETUS VELOX | .1 |
| 17 | TRICORYTHODES MI | 8.9 |
| 18 | CLAASSENI SABULO | 2.4 |
| 19 | HESPEROPERLA PAC | .1 |
| 20 | ISOGENOIDES ELON | 4.5 |
| 21 | SKWALA PARALLELA | .5 |
| 22 | PTERONARCELLA BA | .5 |
| 23 | SIGARA SP. | .6 |
| 24 | BRACHYCENTRUS OC | .2 |
| 25 | PROTOPTILA SP. | .1 |
| 26 | ARCTOPSYCHE GRAN | .3 |
| 27 | CHEUMATOPSYCHE | 6.8 |
| 28 | HYDROPSYCHE OCCI | 5.9 |
| 29 | SYMPHITOPS COCKE | .5 |
| 30 | HYDROPTILA SP. | 1.5 |
| 31 | ZUMATRICHIA NOTO | .3 |
| 32 | CERACLEA SP. | .1 |
| 33 | PSYCHOMYIA FLAVI | .1 |
| 34 | PARARGYRACTIS SP | .1 |
| 35 | OREODYTES SCITIL | .9 |
| 36 | OPTIOSERVUS SPP. | 1.2 |
| 37 | ZAITZEVIA PARVUL | 1.2 |
| 38 | CRYPTOCHIRONOMUS | .2 |
| 39 | MICROPSECTR SP.A | 2 |
| 40 | MICROPSECTR SP.C | 3.5 |
| 41 | MICROTENDIPES SP | 2.3 |
| 42 | PHAENOPSECTRA SP | 1.1 |
| 43 | POLYPEDILUM SP.A | 6.5 |
| 44 | TANYTARSUS SP. C | 2.7 |
| 45 | CORYNONEURA SP. | .1 |
| 46 | CRICOTOPUS SP. B | .1 |
| 47 | EUKIEFFERIELLA B | .1 |
| 48 | EUKIEFFERIELLA E | .4 |
| 49 | HETEROTRISSOCLAD | .1 |
| 50 | ORTHOCLADIUS B | .4 |
| 51 | ORTHOCLADIUS MAL | .1 |

Table 17. Continued

| | | |
|---|---|---|
| 52 | ORTHOCLADIUS NIG | .1 |
| 53 | ORTHOCLADIUS OBU | .5 |
| 54 | PSECTROCLADIUS B | .5 |
| 55 | SYNORTHOCLADIUS | .1 |
| 56 | ABLABESMYIA SP. | 2.4 |
| 57 | CHELIFERA SP. | .1 |
| 58 | SIMULIUM SP. | 1.2 |
| 59 | PROTANYDERUS SP. | .1 |
| 60 | HEXATOMA SP. | .4 |
| 61 | OLIGOCHAETA | .1 |

DIVERSITY INDEX 4.67

Table 17. Continued

SAMPLE: 19-57-C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 5.2 |
| 2 | BAETIS TRICAUDAT | 2.6 |
| 3 | ATTENELLA MARGAR | 1.4 |
| 4 | DRUNELLA GRANDIS | .6 |
| 5 | EPHEMERELLA INFR | .2 |
| 6 | SERRATELLA TIBIA | .5 |
| 7 | TIMPANOGA HECUBA | .1 |
| 8 | EPEORUS ALBERTAE | .5 |
| 9 | HEPTAGENIA SOLIT | 2.1 |
| 10 | NIXE SIMPLICIOID | .1 |
| 11 | RHITHROGENA HAGE | .1 |
| 12 | TRICORYTHODES MI | .2 |
| 13 | CLASSENI SABULO | .2 |
| 14 | ISOGENOIDES ELON | .2 |
| 15 | SKWALA PARALLELA | .2 |
| 16 | OPHIOGOMPHUS SP. | .1 |
| 17 | BRACHYCENTRUS OC | .1 |
| 18 | PROTOPTILA SP. | 1.1 |
| 19 | ARCTOPSYCHE GRAN | .2 |
| 20 | CHEUMATOPSYCHE | 36.8 |
| 21 | HYDROPSYCHE OCCI | 16.5 |
| 22 | SYMPHITOPS COCKE | 5.6 |
| 23 | SYMPHITOPS SLOSS | 2.4 |
| 24 | HYDROPTILA SP. | .8 |
| 25 | LEUCOTRICHIA PIC | .1 |
| 26 | NEOTRICHIA SP. | .1 |
| 27 | ZUMATRICHIA NOTO | .2 |
| 28 | CERACLEA SP. | .5 |
| 29 | OECETIS SP. A | .5 |
| 30 | PSYCHOMYIA FLAVI | 1.2 |
| 31 | PARARGYRACTIS SP | .3 |
| 32 | OPTIOSERVUS SPP. | .6 |
| 33 | ZAITZEVIA PARVUL | .8 |
| 34 | MICROPSECTR SP.A | 2 |
| 35 | MICROPSECTR SP.C | .2 |
| 36 | MICROTENDIPES SP | .8 |
| 37 | PHAENOPSECTRA SP | .2 |
| 38 | POLYPEDILUM SP.A | 8.4 |
| 39 | XENOCHIRONOMUS | .2 |
| 40 | TANYTARSUS SP. C | .5 |
| 41 | PAGASTIA SP. | .1 |
| 42 | CORYNONEURA SP. | .1 |
| 43 | EUKIEFFERIELLA A | .4 |
| 44 | EUKIEFFERIELLA B | .5 |
| 45 | EUKIEFFERIELLA E | .9 |
| 46 | ORTHOCLADIUS B | 1.1 |
| 47 | ORTHOCLADIUS MAL | .2 |
| 48 | ORTHOCLADIUS NIG | .2 |
| 49 | ORTHOCLADIUS OBU | 1.1 |
| 50 | PSECTROCLADIUS B | .1 |
| 51 | ABLABESMYIA SP. | .2 |
| 52 | ANTOCHA SP. | .1 |
| 53 | TURBELLARI | .8 |

DIVERSITY INDEX 3.57

SAMPLE: 21-57-C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .7 |
| 2 | BAETIS INSIGNIFI | 2.3 |
| 3 | BAETIS TRICAUDAT | 1.9 |
| 4 | ATTENELLA MARGAR | .7 |
| 5 | DRUNELLA GRANDIS | .4 |
| 6 | EPHEMERELLA INFR | .9 |
| 7 | SERRATELLA TIBIA | 1.8 |
| 8 | TIMPANOGA HECUBA | 1 |
| 9 | EPEORUS ALBERTAE | 1.2 |
| 10 | HEPTAGENIA SOLIT | 1.1 |
| 11 | PARALEPTOPHL BIC | .2 |
| 12 | PARALEPTOPHL DEB | .1 |
| 13 | TRICORYTHODES MI | .3 |
| 14 | CLAASSENI SABULO | .4 |
| 15 | ISOGENOIDES ELON | .5 |
| 16 | SKWALA PARALLELA | .1 |
| 17 | PTERONARCYS CALI | .2 |
| 18 | SIGARA SP. | .1 |
| 19 | BRACHYCENTRUS OC | .9 |
| 20 | PROTOPTILA SP. | .1 |
| 21 | ARCTOPSYCHE GRAN | 1.2 |
| 22 | CHEUMATOPSYCHE | 28.2 |
| 23 | HYDROPSYCHE OCCI | 3.7 |
| 24 | SYMPHITOPS COCKE | 1.6 |
| 25 | SYMPHITOPS SLOSS | 1.4 |
| 26 | HYDROPTILA SP. | 5.2 |
| 27 | LEUCOTRICHIA PIC | .1 |
| 28 | NEOTRICHIA SP. | .3 |
| 29 | LEPIDOSTOMA SP.A | .1 |
| 30 | CERACLEA SP. | 1.4 |
| 31 | OECETIS SP. A | .5 |
| 32 | PSYCHOMYIA FLAVI | .8 |
| 33 | OPTIOSERVUS SPP. | .4 |
| 34 | ZAITZEVIA PARVUL | 1.2 |
| 35 | CRYPTOCHIRONOMUS | .1 |
| 36 | MICROPSECTR SP.A | .4 |
| 37 | MICROPSECTR SP.C | 1.8 |
| 38 | MICROTENDIPES SP | 8.2 |
| 39 | PHAENOPSECTRA SP | .2 |
| 40 | POLYPEDILUM SP.A | 11.5 |
| 41 | XENOCHIRONOMUS | .1 |
| 42 | PAGASTIA SP. | .1 |
| 43 | CORYNONEURA SP. | .1 |
| 44 | EUKIEFFERIELLA A | .3 |
| 45 | EUKIEFFERIELLA E | 1.2 |
| 46 | EUKIEFFERIELLA G | .1 |
| 47 | ORTHOCLADIUS MAL | .1 |
| 48 | ORTHOCLADIUS NIG | 2.9 |
| 49 | ORTHOCLADIUS OBU | 6.6 |
| 50 | PSECTROCLADIUS B | .5 |
| 51 | SYNORTHOCLADIUS | .3 |
| 52 | ABLABESMYIA SP. | 2.9 |
| 53 | SIMULIUM SP. | .3 |
| 54 | OLIGOCHAETA | .1 |
| 55 | OLIGOCHAETA LUMB | .2 |
| 56 | TURBELLARI | 1.4 |

DIVERSITY INDEX 4.19

Table 17. Continued

SAMPLE: 23-57-C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS HAGENI | .2 |
| 2 | BAETIS INSIGNIFI | .7 |
| 3 | BAETIS TRICAUDAT | 3 |
| 4 | CENTROPTILU SP.B | 1 |
| 5 | CAENIS SIMULANS | .2 |
| 6 | ATTENELLA MARGAR | .2 |
| 7 | HEPTAGENIA SOLIT | 1 |
| 8 | NIXE CRIDDLEI | .7 |
| 9 | NIXE SIMPLICIOID | 2.1 |
| 10 | STENONEMA SP. | 5.9 |
| 11 | PARALEPTOPHL BIC | 6.6 |
| 12 | PARALEPTOPHL DEB | 3.3 |
| 13 | ISOGENOIDES ELON | .2 |
| 14 | OPHIOGOMPHUS SP. | .2 |
| 15 | CHEUMATOPSYCHE | 1.6 |
| 16 | HYDROPTILA SP. | .3 |
| 17 | LEPIDOSTOMA SP.A | 1.2 |
| 18 | CERACLEA SP. | 1.9 |
| 19 | POLYCENTROPUS SP | .3 |
| 20 | PARARGYRACTIS SP | .2 |
| 21 | OREODYTES SCITIL | .7 |
| 22 | DUBIRAPHIA SP. | 3.1 |
| 23 | OPTIOSERVUS SPP. | .2 |
| 24 | ZAITZEVIA PARVUL | .3 |
| 25 | CRYPTOCHIRONOMUS | .3 |
| 26 | DICROTENDIP SP.B | .2 |
| 27 | MICROPSECTR SP.C | 1.6 |
| 28 | MICROTENDIPES SP | 4.7 |
| 29 | PARACHIRONOMUS | .3 |
| 30 | PAGASTIA SP. | .3 |
| 31 | CORYNONEURA SP. | .3 |
| 32 | EUKIEFFERIELLA E | .2 |
| 33 | ORTHOCLADIUS OBU | 4.7 |
| 34 | PSECTROCLADIUS B | .2 |
| 35 | SYNORTHOCLADIUS | .9 |
| 36 | THIENEMANIELL SP | .3 |
| 37 | PROCLADIUS SP. A | .2 |
| 38 | CHELIFERA SP. | .3 |
| 39 | WIEDEMANNIA SP. | .2 |
| 40 | SIMULIUM SP. | .2 |
| 41 | HYALELLA AZTECA | 8.3 |
| 42 | GYRAULUS SP. | 12.5 |
| 43 | LYMNAEA SP. | 1 |
| 44 | PHYSA SP. | 19.8 |
| 45 | PISIDIUM SP. | .2 |
| 46 | OLIGOCHAETA | .7 |
| 47 | OLIGOCHAETA LUMB | 5.9 |
| 48 | TURBELLARI | 1 |
| 49 | MYSTACIDES SP. | .2 |
| 50 | HELOBDELLA SP. | .2 |

DIVERSITY INDEX 4.3

Table 17. Continued

SAMPLE: 24-57-C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | 2.1 |
| 2 | BAETIS TRICAUDAT | .7 |
| 3 | ATTENELLA MARGAR | .1 |
| 4 | DRUNELLA GRANDIS | .2 |
| 5 | EPHEMERELLA INFR | .1 |
| 6 | TIMPANOGA HECUBA | .1 |
| 7 | HEPTAGENIA SOLIT | .4 |
| 8 | NIXE SIMPLICIOID | .1 |
| 9 | RHITHROGENA HAGE | .3 |
| 10 | STENONEMA SP. | 3.6 |
| 11 | PARALEPTOPHL BIC | .3 |
| 12 | TRICORYTHODES MI | 1 |
| 13 | CLAASSENI SABULO | .1 |
| 14 | ISOGENOIDES ELON | .1 |
| 15 | OPHIOGOMPHUS SP. | .1 |
| 16 | PROTOPTILA SP. | .5 |
| 17 | ARCTOPSYCHE GRAN | .1 |
| 18 | CHEUMATOPSYCHE | 20.3 |
| 19 | HYDROPSYCHE OCCI | .6 |
| 20 | SYMPHITOPS COCKE | 3.3 |
| 21 | HYDROPTILA SP. | .1 |
| 22 | LEUCOTRICHIA PIC | .1 |
| 23 | ZUMATRICHIA NOTO | .1 |
| 24 | CERACLEA SP. | 3.9 |
| 25 | PSYCHOMYIA FLAVI | .2 |
| 26 | PARARGYRACTIS SP | .1 |
| 27 | OREODYTES SCITIL | .1 |
| 28 | NARPUS CONCOLOR | .1 |
| 29 | OPTIOSERVUS SPP. | .3 |
| 30 | ZAITZEVIA PARVUL | 2.4 |
| 31 | CRYPTOCHIRONOMUS | .1 |
| 32 | MICROPSECTR SP.A | 1.9 |
| 33 | MICROPSECTR SP.C | 2.2 |
| 34 | MICROTENDIPES SP | 10.9 |
| 35 | POLYPEDILUM SP.A | 2.7 |
| 36 | XENOCHIRONOMUS | .5 |
| 37 | TANYTARSUS SP. C | 2.5 |
| 38 | PAGASTIA SP. | .2 |
| 39 | CRICOTOPUS SP. B | .3 |
| 40 | EUKIEFFERIELLA A | .2 |
| 41 | EUKIEFFERIELLA B | .3 |
| 42 | EUKIEFFERIELLA E | 4.4 |
| 43 | ORTHOCLADIUS B | .1 |
| 44 | ORTHOCLADIUS MAL | .1 |
| 45 | ORTHOCLADIUS NIG | .3 |
| 46 | ORTHOCLADIUS OBU | 8.6 |
| 47 | PSECTROCLADIUS B | .3 |
| 48 | SYNORTHOCLADIUS | .8 |
| 49 | ABLABESMYIA SP. | .3 |
| 50 | CHELIFERA SP. | .1 |
| 51 | SIMULIUM SP. | 2.5 |
| 52 | FERRISSIA SP. | .5 |
| 53 | LYMNAEA SP. | 18.3 |
| 54 | OLIGOCHAETA | .1 |
| 55 | OLIGOCHAETA LUMB | .6 |

DIVERSITY INDEX 4.01

SAMPLE: 25-58-C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | BAETIS INSIGNIFI | .1 |
| 2 | ATTENELLA MARGAR | .6 |
| 3 | SERRATELLA TIBIA | .1 |
| 4 | TIMPANOGA HECUBA | 1.5 |
| 5 | EPEORUS ALBERTAE | .1 |
| 6 | HEPTAGENIA SOLIT | 2.7 |
| 7 | NIXE SIMPLICIOID | .1 |
| 8 | STENONEMA SP. | 8.6 |
| 9 | TRICORYTHODES MI | .4 |
| 10 | CLAASSENI SABULO | .1 |
| 11 | ISOGENOIDES ELON | .1 |
| 12 | OPHIOGOMPHUS SP. | .1 |
| 13 | PROTOPTILA SP. | .3 |
| 14 | CHEUMATOPSYCHE | 34.5 |
| 15 | HYDROPSYCHE OCCI | .2 |
| 16 | SYMPHITOPS COCKE | 1.9 |
| 17 | HYDROPTILA SP. | .3 |
| 18 | CERACLEA SP. | 1.4 |
| 19 | PSYCHOMYIA FLAVI | .3 |
| 20 | PARARGYRACTIS SP | .1 |
| 21 | OREODYTES SCITIL | .1 |
| 22 | OPTIOSERVUS SPP. | .1 |
| 23 | ZAITZEVIA PARVUL | 1.1 |
| 24 | DICROTENDIP SP.B | .6 |
| 25 | DICROTENDIP SP.C | .2 |
| 26 | MICROPSECTR SP.A | .6 |
| 27 | MICROPSECTR SP.C | 3.4 |
| 28 | MICROTENDIPES SP | 2.1 |
| 29 | POLYPEDILUM SP.A | .5 |
| 30 | TANYTARSUS SP. C | 3.2 |
| 31 | STICTOCHIRONO SP | .4 |
| 32 | EUKIEFFERIELLA E | .5 |
| 33 | ORTHOCLADIUS OBU | 1.2 |
| 34 | SYNORTHOCLADIUS | .1 |
| 35 | ABLABESMYIA SP. | .5 |
| 36 | LEBERTIA SP. | .1 |
| 37 | FERRISSIA SP. | .1 |
| 38 | GYRAULUS SP. | 12.4 |
| 39 | LYMNAEA SP. | 18 |
| 40 | PHYSA SP. | .2 |
| 41 | OLIGOCHAETA LUMB | 1.3 |

DIVERSITY INDEX 3.3

Table 17. Continued

SAMPLE: 27-58-C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CENTROPTILU SP.B | 1.3 |
| 2 | TIMPANOGA HECUBA | 2.1 |
| 3 | HEPTAGENIA SOLIT | 1.6 |
| 4 | NIXE SIMPLICIOID | .3 |
| 5 | STENONEMA SP. | .3 |
| 6 | TRICORYTHODES MI | .3 |
| 7 | CHEUMATOPSYCHE | .3 |
| 8 | SYMPHITOPS COCKE | .5 |
| 9 | ZAITZEVIA PARVUL | 7.9 |
| 10 | CRYPTOTENDIPE SP | .3 |
| 11 | DICROTENDIP SP.B | 15.3 |
| 12 | DICROTENDIP SP.C | .3 |
| 13 | MICROPSECTR SP.A | 5.3 |
| 14 | MICROPSECTR SP.C | 6.9 |
| 15 | MICROTENDIPES SP | 1.1 |
| 16 | PARACLADOPE SP.B | .3 |
| 17 | PHAENOPSECTRA SP | 1.1 |
| 18 | POLYPEDILUM SP.A | .3 |
| 19 | POLYPEDILUM SP.D | .8 |
| 20 | TANYTARSUS SP. C | 2.6 |
| 21 | EUKIEFFERIELLA E | .3 |
| 22 | ORTHOCLADIUS OBU | 4 |
| 23 | PSECTROCLADIUS B | 1.1 |
| 24 | SIMULIUM SP. | .3 |
| 25 | CLADOCERA | 35.7 |
| 26 | LEBERTIA SP. | .3 |
| 27 | OLIGOCHAETA LUMB | 9 |
| 28 | PARACHIRON SP. B | .8 |

DIVERSITY INDEX 3.26

SAMPLE: 31-58-C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CENTROPTILU SP.A | .5 |
| 2 | NIXE SIMPLICIOID | 1.4 |
| 3 | STENONEMA SP. | .8 |
| 4 | PARALEPTOPHL BIC | 38.3 |
| 5 | PARALEPTOPHL DEB | 5.9 |
| 6 | TRICORYTHODES MI | 7.2 |
| 7 | CHEUMATOPSYCHE | 2.7 |
| 8 | SYMPHITOPS COCKE | .3 |
| 9 | HYDROPTILA SP. | 1.4 |
| 10 | CERACLEA SP. | 1.3 |
| 11 | CRYPTOCHIRONOMUS | .4 |
| 12 | DICROTENDIP SP.B | .5 |
| 13 | MICROPSECTR SP.A | .3 |
| 14 | MICROPSECTR SP.C | .3 |
| 15 | MICROTENDIPES SP | 13.9 |
| 16 | PARACLADOPE SP.B | .1 |
| 17 | PHAENOPSECTRA SP | .2 |
| 18 | TANYTARSUS SP. C | .8 |
| 19 | POTTHASTIA SP. | .1 |
| 20 | BRILLIA SP. | .1 |
| 21 | ORTHOCLADIUS OBU | 4.3 |
| 22 | PSECTROCLADIUS B | .1 |
| 23 | SYNORTHOCLADIUS | 2.2 |
| 24 | ABLABESMYIA SP. | .3 |
| 25 | SIMULIUM SP. | .5 |
| 26 | TIPULA SP. | .6 |
| 27 | CLADOCERA | .3 |
| 28 | LEBERTIA SP. | .3 |
| 29 | GYRAULUS SP. | 6.7 |
| 30 | LYMNAEA SP. | 5.7 |
| 31 | PHYSA SP. | .6 |
| 32 | OLIGOCHAETA LUMB | .6 |
| 33 | PARACHIRON SP. B | .1 |
| 34 | PARATANYTAR SP.B | .2 |
| 35 | GAMMARUS SP. | 1.3 |

DIVERSITY INDEX 3.33

Table 17. Deep Water Monitoring Stations - Petite Ponar Grab Samples

SAMPLE: 3-57C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. | 9.7 |
| 2 | OLIGOCHAETA | 90.3 |

DIVERSITY INDEX .46

SAMPLE: 26-57C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. | .1 |
| 2 | CRYPTOCHIRONOMUS | .6 |
| 3 | CRYPTOTENDIPE SP | .9 |
| 4 | DICROTENDIP SP.A | .6 |
| 5 | PARACLADOPE SP.B | .1 |
| 6 | PARALAUTERBORNIE | 2.1 |
| 7 | POLYPEDILUM SP.C | 7.1 |
| 8 | TANYTARSUS SP. A | .1 |
| 9 | MONODIAMESA SP. | .1 |
| 10 | PROCLADIUS SP. A | .3 |
| 11 | OLIGOCHAETA | 87.9 |

DIVERSITY INDEX .77

SAMPLE: 28A-57C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | PALPOMY-GP SP. A | .7 |
| 2 | TANYTARSUS SP. A | 6.7 |
| 3 | PROCLADIUS SP. A | 17.4 |
| 4 | CLADOCERA | 1.3 |
| 5 | OSTRACODA | .7 |
| 6 | OLIGOCHAETA | 73.2 |

DIVERSITY INDEX 1.21

SAMPLE: 28B-57C
SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | CHIRONOMUS SP. | 1.4 |
| 2 | TANYTARSUS SP. A | .1 |
| 3 | PROCLADIUS SP. A | 1.1 |
| 4 | OLIGOCHAETA | 97.4 |

DIVERSITY INDEX .2

SAMPLE: 30B-57C

SPECIES DISTRIBUTION DATA

| SPECIES | SPECIES NAME | PERCENTAGE |
|---|---|---|
| 1 | OECETIS SP. B | .5 |
| 2 | PALPOMY-GP SP. A | 3.6 |
| 3 | CRYPTOCHIRONOMUS | .9 |
| 4 | DICROTENDIP SP.A | .5 |
| 5 | LENZIELLA SP. | 1.4 |
| 6 | PARALAUTERBORNIE | 10.9 |
| 7 | POLYPEDILUM SP.B | .9 |
| 8 | TANYTARSUS SP. A | .5 |
| 9 | PROCLADIUS SP. A | 1.4 |
| 10 | CLADOCERA | 7.3 |
| 11 | OSTRACODA | .5 |
| 12 | OLIGOCHAETA | 66.4 |
| 13 | COPEPODA | 5.5 |

DIVERSITY INDEX 1.85

| Site Number | 1 | 2 | 4 | 5 | 6 | 8 | 9 | 10 | 11 | 13 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 24 | 27 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | | |
| 2 | 55 | | | | | | | | | | | | | | | | | | | |
| 4 | 59 | 55 | | | | | | | | | | | | | | | | | | |
| 5 | 57 | 54 | 68 | | | | | | | | | | | | | | | | | |
| 6 | 61 | 59 | 70 | 54 | | | | | | | | | | | | | | | | |
| 8 | 66 | 43 | 55 | 40 | 66 | | | | | | | | | | | | | | | |
| 9 | 64 | 40 | 54 | 38 | 65 | 83 | | | | | | | | | | | | | | |
| 10 | 50 | 43 | 45 | 33 | 57 | 53 | 53 | | | | | | | | | | | | | |
| 11 | 70 | 50 | 49 | 44 | 62 | 71 | 68 | 56 | | | | | | | | | | | | |
| 13 | 66 | 49 | 55 | 51 | 56 | 64 | 59 | 59 | 72 | | | | | | | | | | | |
| 15 | 67 | 37 | 42 | 44 | 49 | 68 | 69 | 46 | 69 | 73 | | | | | | | | | | |
| 16 | 54 | 31 | 36 | 27 | 50 | 67 | 68 | 60 | 68 | 56 | 64 | | | | | | | | | |
| 17 | 59 | 35 | 42 | 34 | 52 | 67 | 69 | 51 | 67 | 53 | 68 | 72 | | | | | | | | |
| 18 | 70 | 43 | 57 | 47 | 58 | 62 | 62 | 52 | 66 | 57 | 63 | 52 | 72 | | | | | | | |
| 19 | 62 | 33 | 42 | 36 | 53 | 68 | 67 | 42 | 65 | 51 | 65 | 63 | 80 | 71 | | | | | | |
| 20 | 68 | 40 | 51 | 53 | 59 | 62 | 60 | 42 | 69 | 56 | 64 | 60 | 60 | 72 | 71 | | | | | |
| 21 | 66 | 36 | 40 | 43 | 49 | 56 | 59 | 39 | 60 | 49 | 66 | 61 | 73 | 74 | 81 | 77 | | | | |
| 22 | 51 | 22 | 24 | 28 | 35 | 54 | 58 | 37 | 52 | 54 | 69 | 57 | 63 | 58 | 68 | 62 | 74 | | | |
| 24 | 7 | 7 | 7 | 6 | 10 | 10 | 12 | 10 | 14 | 9 | 8 | 16 | 9 | 9 | 16 | 17 | 20 | 22 | | |
| 27 | 4 | 22 | 14 | 6 | 27 | 19 | 21 | 24 | 15 | 11 | 13 | 23 | 18 | 10 | 12 | 12 | 9 | 9 | 18 | |

Figure 18.A. Similarity coefficients for kick samples taken during spring of 1984, Clark Fork River and tributaries (x 100). Coefficients greater than 40 are underlined; those greater than 60 are double-underlined.

| Site Number | 1 | 2 | 4 | 5 | 6 | 8 | 9 | 10 | 11 | 13 | 14 | 15 | 19 | 21 | 23 | 24 | 25 | 27 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | |
| 2 | 40 | | | | | | | | | | | | | | | | | | |
| 4 | 60 | 53 | | | | | | | | | | | | | | | | | |
| 5 | 43 | 33 | 63 | | | | | | | | | | | | | | | | |
| 6 | 44 | 27 | 53 | 55 | | | | | | | | | | | | | | | |
| 8 | 35 | 26 | 40 | 41 | 57 | | | | | | | | | | | | | | |
| 9 | 53 | 36 | 54 | 54 | 67 | 56 | | | | | | | | | | | | | |
| 10 | 51 | 47 | 49 | 42 | 46 | 32 | 50 | | | | | | | | | | | | |
| 11 | 51 | 35 | 46 | 36 | 41 | 30 | 57 | 64 | | | | | | | | | | | |
| 13 | 39 | 17 | 27 | 27 | 48 | 33 | 42 | 44 | 43 | | | | | | | | | | |
| 14 | 39 | 27 | 31 | 30 | 43 | 35 | 58 | 47 | 58 | 54 | | | | | | | | | |
| 15 | 48 | 31 | 39 | 33 | 41 | 34 | 58 | 53 | 77 | 48 | 66 | | | | | | | | |
| 19 | 40 | 24 | 37 | 40 | 66 | 41 | 61 | 40 | 46 | 44 | 49 | 45 | | | | | | | |
| 21 | 41 | 26 | 38 | 45 | 63 | 42 | 63 | 40 | 34 | 40 | 50 | 35 | 69 | | | | | | |
| 23 | 8 | 6 | 7 | 10 | 15 | 12 | 12 | 13 | 12 | 15 | 27 | 14 | 21 | 25 | | | | | |
| 24 | 20 | 14 | 23 | 28 | 50 | 32 | 42 | 27 | 25 | 25 | 41 | 29 | 50 | 56 | 34 | | | | |
| 25 | 25 | 14 | 19 | 27 | 58 | 34 | 41 | 38 | 27 | 36 | 37 | 32 | 52 | 57 | 24 | 52 | | | |
| 27 | 7 | 5 | 5 | 6 | 10 | 10 | 8 | 8 | 6 | 14 | 9 | 7 | 13 | 10 | 12 | 9 | 12 | | |
| 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 69 | |

Figure 18.B. Similarity coefficients for kick samples taken during summer of 1984, Clark Fork River and tributaries (x 100). Coefficients greater than 40 are underlined; those greater than 60 are double-underlined. (Replicate data for each site combined.)

| Site Number | 1 | 2 | 4 | 5 | 6 | 8 | 9 | 10 | 11 | 13 | 14 | 15 | 19 | 21 | 23 | 24 | 25 | 27 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | |
| 2 | 49 | | | | | | | | | | | | | | | | | |
| 4 | 53 | 46 | | | | | | | | | | | | | | | | |
| 5 | 68 | 57 | 75 | | | | | | | | | | | | | | | |
| 6 | 65 | 54 | 59 | 65 | | | | | | | | | | | | | | |
| 8 | 59 | 52 | 61 | 70 | 65 | | | | | | | | | | | | | |
| 9 | 59 | 55 | 63 | 68 | 80 | 74 | | | | | | | | | | | | |
| 10 | 45 | 44 | 70 | 60 | 53 | 53 | 60 | | | | | | | | | | | |
| 11 | 62 | 52 | 57 | 67 | 58 | 69 | 71 | 61 | | | | | | | | | | |
| 13 | 16 | 23 | 26 | 21 | 24 | 32 | 33 | 33 | 49 | | | | | | | | | |
| 14 | 37 | 38 | 55 | 48 | 51 | 55 | 61 | 59 | 70 | 64 | | | | | | | | |
| 15 | 68 | 52 | 58 | 69 | 64 | 74 | 73 | 60 | 87 | 44 | 67 | | | | | | | |
| 19 | 57 | 54 | 60 | 65 | 73 | 73 | 81 | 63 | 76 | 39 | 69 | 80 | | | | | | |
| 21 | 66 | 50 | 49 | 57 | 74 | 67 | 70 | 52 | 66 | 37 | 58 | 72 | 76 | | | | | |
| 23 | 3 | 10 | 5 | 6 | 6 | 11 | 10 | 8 | 12 | 10 | 12 | 8 | 7 | 5 | | | | |
| 24 | 7 | 18 | 16 | 16 | 19 | 23 | 22 | 18 | 21 | 18 | 22 | 19 | 20 | 20 | 21 | | | |
| 25 | 5 | 17 | 27 | 15 | 27 | 25 | 35 | 30 | 24 | 26 | 36 | 24 | 31 | 29 | 16 | 40 | | |
| 27 | 5 | 17 | 28 | 19 | 31 | 28 | 32 | 27 | 19 | 20 | 30 | 19 | 30 | 25 | 11 | 30 | 51 | |

Figure 18.C. Similarity coefficients for kick samples taken during fall of 1984, Clark Fork River and tributaries (x 100). Coefficients greater than 40 are underlined; those greater than 60 are double-underlined. (Replicate data for each site combined.)

| Site Number | 1 | 2 | 4 | 5 | 6 | 8 | 9 | 10 | 11 | 13 | 14 | 15 | 19 | 21 | 23 | 24 | 25 | 27 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | |
| 2 | 39 | | | | | | | | | | | | | | | | | | |
| 4 | 42 | 30 | | | | | | | | | | | | | | | | | |
| 5 | 55 | 40 | 58 | | | | | | | | | | | | | | | | |
| 6 | 65 | 33 | 43 | 46 | | | | | | | | | | | | | | | |
| 8 | 66 | 43 | 34 | 44 | 63 | | | | | | | | | | | | | | |
| 9 | 56 | 44 | 53 | 62 | 57 | 57 | | | | | | | | | | | | | |
| 10 | 52 | 41 | 36 | 51 | 55 | 52 | 43 | | | | | | | | | | | | |
| 11 | 56 | 37 | 48 | 64 | 46 | 48 | 56 | 48 | | | | | | | | | | | |
| 13 | 57 | 36 | 39 | 45 | 64 | 58 | 56 | 51 | 64 | | | | | | | | | | |
| 14 | 47 | 33 | 42 | 48 | 53 | 43 | 57 | 40 | 63 | 79 | | | | | | | | | |
| 15 | 44 | 40 | 39 | 46 | 49 | 40 | 58 | 38 | 59 | 75 | 84 | | | | | | | | |
| 19 | 62 | 53 | 51 | 61 | 52 | 56 | 68 | 44 | 60 | 56 | 51 | 53 | | | | | | | |
| 21 | 52 | 24 | 30 | 33 | 58 | 50 | 39 | 49 | 31 | 47 | 36 | 34 | 42 | | | | | | |
| 23 | 18 | 15 | 18 | 17 | 17 | 16 | 17 | 14 | 32 | 32 | 31 | 31 | 17 | 13 | | | | | |
| 24 | 27 | 36 | 29 | 21 | 26 | 41 | 36 | 22 | 45 | 52 | 52 | 55 | 39 | 19 | 35 | | | | |
| 25 | 20 | 20 | 18 | 13 | 20 | 31 | 27 | 9 | 34 | 45 | 48 | 48 | 23 | 13 | 30 | 71 | | | |
| 27 | 25 | 27 | 35 | 19 | 33 | 31 | 35 | 26 | 41 | 44 | 39 | 38 | 32 | 20 | 33 | 54 | 44 | | |
| 31 | 20 | 13 | 24 | 12 | 19 | 18 | 21 | 12 | 31 | 46 | 45 | 47 | 24 | 16 | 27 | 41 | 40 | 36 | |

Figure 18.D. Similarity coefficients for kick samples taken during spring of 1985, Clark Fork River and tributaries (x 100). Coefficients greater than 40 are underlined; those greater than 60 are double-underlined. (Replicate data for each site combined.)

| Site Number | 1 | 2 | 4 | 5 | 6 | 8 | 9 | 10 | 11 | 13 | 14 | 15 | 19 | 21 | 23 | 24 | 25 | 27 | 31 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | | | | | | | | | | | | |
| 2 | 38 | | | | | | | | | | | | | | | | | | |
| 4 | 58 | 44 | | | | | | | | | | | | | | | | | |
| 5 | 57 | 36 | 69 | | | | | | | | | | | | | | | | |
| 6 | 58 | 35 | 67 | 74 | | | | | | | | | | | | | | | |
| 8 | 54 | 31 | 69 | 73 | 75 | | | | | | | | | | | | | | |
| 9 | 48 | 33 | 61 | 56 | 68 | 70 | | | | | | | | | | | | | |
| 10 | 64 | 45 | 54 | 52 | 50 | 46 | 45 | | | | | | | | | | | | |
| 11 | 65 | 34 | 43 | 50 | 49 | 37 | 35 | 59 | | | | | | | | | | | |
| 13 | 62 | 36 | 47 | 50 | 61 | 50 | 55 | 56 | 61 | | | | | | | | | | |
| 14 | 36 | 23 | 28 | 29 | 47 | 32 | 49 | 35 | 41 | 62 | | | | | | | | | |
| 15 | 52 | 32 | 43 | 43 | 52 | 44 | 54 | 55 | 54 | 71 | 65 | | | | | | | | |
| 19 | 50 | 29 | 49 | 52 | 57 | 58 | 59 | 41 | 44 | 50 | 31 | 40 | | | | | | | |
| 21 | 31 | 29 | 48 | 44 | 52 | 51 | 54 | 36 | 29 | 38 | 37 | 39 | 61 | | | | | | |
| 23 | 10 | 13 | 10 | 9 | 13 | 10 | 12 | 11 | 9 | 13 | 21 | 17 | 11 | 22 | | | | | |
| 24 | 24 | 24 | 34 | 39 | 41 | 37 | 40 | 30 | 27 | 33 | 34 | 30 | 41 | 53 | 25 | | | | |
| 25 | 12 | 16 | 26 | 31 | 33 | 31 | 33 | 16 | 16 | 22 | 18 | 22 | 47 | 44 | 31 | 59 | | | |
| 27 | 9 | 18 | 11 | 9 | 9 | 5 | 11 | 14 | 10 | 13 | 12 | 15 | 9 | 13 | 16 | 18 | 17 | | |
| 31 | 9 | 7 | 7 | 4 | 13 | 10 | 17 | 8 | 7 | 14 | 32 | 20 | 8 | 21 | 35 | 31 | 25 | 10 | |

Figure 18.E. Similarity coefficients for kick samples taken during summer of 1985, Clark Fork River and tributaries (x 100). Coefficients greater than 40 are underlined; those greater than 60 are double-underlined. (Replicate data for each site combined.)

Table 19. Genera of soft-bodied (non-diatom) algae found in periphyton samples from the lower Clark Fork River and tributaries.

| Taxa | March 5-9, 1984 | July 31- August 3, 1984 | October 30- November 2, 1984 | March 18-21, 1985 | July 29- August 1, 1985 |
|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | |
| Ankistrodesmus | X | X | X | X | X |
| Botryococcus | | X | | | |
| Bulbochaete | | X | | | X |
| Chaetophora | | | [illegible] | | |
| Cladophora | X | X | X | X | X |
| Closterium | X | X | X | X | X |
| Coelastrum | X | | X | | |
| Cosmarium | X | X | X | X | X |
| Cylindrocapsa | | | | X | |
| Gloeocystis | | | X | | |
| Gongrosira | | X | | | X |
| Hormidium | | | | | X |
| Mougeotia | X | X | X | X | X |
| Nephrocytium | | X | | | |
| Oedogonium | X | X | X | X | X |
| Oocystis | | | | | X |
| Pediastrum | X | X | X | X | X |
| Planktosphaeria | | | | | X |
| Pseudoulvella | | X | | | |
| Scenedesmus | X | X | X | X | X |
| Selenastrum | | | | | X |
| Sphaerocystis | | | X | X | |
| Spirogyra | X | X | X | X | X |
| Staurastrum | X | X | X | X | X |
| Stigeoclonium | X | X | X | X | X |
| Ulothrix | X | X | X | X | X |
| Westella | | | | | X |
| Zygnema | | | X | X | X |
| Golden-brown Algae (Chrysophyta) | | | | | |
| Dinobryon | X | | | | |
| Hydrurus | X | X | X | X | |
| Tribonema | X | | | X | |
| Vaucheria | | | X | | |
| Red Algae (Rhodophyta) | | | | | |
| Audouinella | X | X | X | X | X |
| Lemanea | | X | | | |

Table 19. (Continued)

| Taxa | March 5-9, 1984 | July 31-August 3, 1984 | October 30-November 2, 1984 | March 18-21, 1985 | July 29-August 1, 1985 |
|---|---|---|---|---|---|
| Blue-green Algae (Cyanophyta) | | | | | |
| Calothrix | | X | X | X | |
| Chamaesiphon | X | | | | |
| Chroococcus | X | | X | | |
| Coelosphaerium | | X | | | X |
| Dactylococcopsis | | X | X | X | |
| Dichothrix | | X | X | X | |
| Lyngbya | X | | | | |
| Merismopedia | | X | | | X |
| Nostoc | | X | X | X | X |
| Oscillatoria | X | X | X | X | X |
| Phormidium | X | X | X | X | X |
| Rivularia | X | X | X | X | X |
| Romeria | | | | | X |
| Tolypothrix | X | X | X | X | X |
| Total Genera | 24 | 30 | 29 | 26 | 28 |

Table 20. Structure and composition of benthic diatom associations from the Lower Clark Fork River, Spring 1984, including Shannon Diversity Index and percent of cells[1] representing species in the three pollution tolerance groups of Lange-Bertalot (1979).

| | | CFR at Turah | Blackfoot River near mouth | CFR Milltown Dam | CFR Above Missoula | CFR Above Missoula WWTP | CFR Below Missoula WWTP | CFR at Shuffields | Bitterroot River Near Mouth | CFR at Harper Bridge | CFR .05 Mi. Blw. Champion |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Species Counted | | 26 | 27 | 26 | 26 | 18 | 23 | 26 | 31 | 21 | 20 |
| Species Diversity | | 3.581 | 3.425 | 3.505 | 3.043 | 2.395 | 3.426 | 3.359 | 3.117 | 3.615 | 2.862 |
| L-B Groups: | | | | | | | | | | | |
| 1. Most Tolerant | | 4.4 | 11.7 | 6.6 | 5.7 | 3.2 | 21.9 | 4.0 | 1.4 | 2.7 | 6.5 |
| 2. More Tolerant | | 58.1 | 29.3 | 35.6 | 42.8 | 26.5 | 49.1 | 31.8 | 25.5 | 32.6 | 38.5 |
| 3. Sensitive | | 37.9 | 59.7 | 58.1 | 51.4 | 70.4 | 29.2 | 64.4 | 73.2 | 64.9 | 54.8 |
| Major Species (%)[2] and L-B Group: | | | | | | | | | | | |
| Achnanthes deflexa | 3 | | | | | | | | 4.5 | + | |
| Achnanthes minutissima | 3 | 2.3 | 6.6 | 2.4 | 0.8 | 0.8 | 1.9 | 0.8 | 44.2 | 7.7 | 0.5 |
| Cymbella affinis | 3 | 0.3 | 7.4 | 3.0 | 0.5 | 0.5 | 3.5 | 5.2 | 4.7 | 8.2 | 1.0 |
| Cymbella minuta | 2 | 15.0 | 4.1 | 5.6 | 1.0 | 3.4 | 3.2 | 6.6 | 14.1 | 14.3 | 14.2 |
| Cymbella sinuata | 3 | 1.6 | 0.3 | 0.8 | + | | 0.3 | + | 0.5 | + | 0.8 |
| Diatoma tenue | 2 | 18.9 | + | 3.0 | 14.2 | 3.4 | 0.5 | 4.4 | | 0.8 | 2.4 |
| Fragilaria construens | 3 | 1.0 | 1.3 | 1.1 | + | + | 0.8 | 1.1 | 0.5 | 0.8 | |
| Fragilaria pinnata | 3 | 0.3 | + | + | 1.2 | | 0.5 | - | 0.3 | 2.4 | |
| Fragilaria vaucheriae | 2 | 11.1 | 19.6 | 13.6 | 17.6 | 12.[illegible] | 3.5 | [illegible].3 | 0.8 | 3.2 | 8.4 |
| Gomphonema olivaceum | 3 | 19.7 | 26.5 | 27.4 | 39.1 | 51.[illegible] | 7.7 | 34.[illegible] | + | 19.9 | 43.8 |
| Navicula accomoda | 1 | | | | | | 5.9 | | | | |
| Navicula cryptocephala[3] | 1 | + | 7.6 | 4.0 | 2.1 | 2.4 | 0.5 | [illegible] | 0.8 | 2.4 | 5.5 |
| Nitzschia dissipata | 3 | 4.7 | 4.1 | 18.9 | [illegible] | 15.0 | 5.1 | [illegible].6 | 6.0 | 12.4 | 4.7 |
| Nitzschia frustulum | 3 | 1.6 | 0.3 | 2.4 | 0.5 | 1.6 | 8.0 | [illegible] | 3.1 | 9.0 | |
| Nitzschia paleacea | 2 | 2.1 | 3.1 | 3.2 | 3.4 | 3.4 | 4.0 | 2.9 | 2.1 | 5.8 | 8.7 |
| Nitzschia perpusilla | 2 | 3.1 | 0.8 | 4.3 | 0.5 | 0.8 | 37.9 | - | 4.7 | 1.9 | 2.9 |
| Nitzschia romana | 3 | | | | | +? | | 4.[illegible] | | 2.6 | 2.1 |
| Surirella ovata | 2 | 6.0 | + | 2.1 | 2.6 | 0.[illegible] | + | 1.[illegible] | | + | 0.3 |
| Synedra mazamaensis | 3 | 1.3 | 9.7 | 0.5 | 1.0 | 0.3 | + | 0.[illegible] | 3.4 | 0.3 | 1.0 |

Table 20. Continued

| | L-B Group | CFR at Huson | CFR at Ninemile | CFR at Lozeau | CFR Near St. Regis | Flathead River Near Mouth | CFR at Plains | CFR Above T. Falls Reservoir | CFR Below T. Falls Reservoir | CFR Below Noxon Reservoir |
|---|---|---|---|---|---|---|---|---|---|---|
| Species Counted | | 22 | 25 | 23 | 25 | 55 | 40 | 45 | 34 | 35 |
| Species Diversity | | 3.300 | 3.445 | 3.353 | 3.250 | 4.794 | 4.329 | 4.724 | 3.752 | 3.975 |
| L-B Groups: | | | | | | | | | | |
| 1. Most Tolerant | | 7.0 | 1.8 | 7.9 | 10.0 | 9.1 | 13.8 | 14.7 | 4.3 | 6.2 |
| 2. More Tolerant | | 35.4 | 25.6 | 20.6 | 20.7 | 24.4 | 30.6 | 30.9 | 30.1 | 26.3 |
| 3. Sensitive | | 57.4 | 72.8 | 71.6 | 69.1 | 67.0 | 55.3 | 55.0 | 65.6 | 68.1 |
| Major Species (%)[2] and L-B Group: | | | | | | | | | | |
| Achnanthes deflexa | 3 | | + | | | 0.3 | | 0.5 | | 12.4 |
| Achnanthes minutissima | 3 | 2.7 | 3.7 | 1.8 | 1.0 | 14.4 | 5.9 | 8.6 | 32.0 | 25.9 |
| Cymbella affinis | 3 | 1.9 | 10.1 | 1.8 | 1.0 | 5.8 | 10.3 | 3.9 | 7.5 | 1.4 |
| Cymbella minuta | 2 | 8.0 | 10.4 | 7.6 | 5.1 | 4.4 | 6.8 | 2.1 | 2.2 | 1.4 |
| Cymbella sinuata | 3 | 9.1 | 1.1 | 0.3 | 0.5 | 0.3 | 1.2 | 1.6 | + | + |
| Diatoma tenue | 2 | 6.2 | 0.6 | 2.1 | 3.7 | 3.0 | 4.9 | 5.7 | 5.9 | 5.5 |
| Fragilaria construens | 3 | 0.5 | 0.3 | + | 1.7 | 10.2 | 2.3 | 2.3 | 0.8 | 0.3 |
| Fragilaria pinnata | 3 | | | 0.3 | + | 5.2 | 0.2 | 0.5 | 1.1 | |
| Fragilaria vaucheriae | 2 | 7.2 | 2.0 | 2.9 | 3.7 | 8.6 | 10.1 | 10.9 | 13.2 | 3.0 |
| Gomphonema olivaceum | 3 | 36.7 | 25.8 | 27.8 | 38.6 | | 13.8 | 6.0 | 2.2 | 6.3 |
| Navicula accomoda | 1 | + | | | | | | | | |
| Navicula cryptocephala[3] | 1 | 4.8 | 1.7 | 1.3 | 0.5 | | 0.9 | 1.6 | 1.1 | 1.1 |
| Nitzschia dissipata | 3 | 3.8 | 0.6 | 7.9 | 9.5 | 1.1 | 10.1 | 7.3 | 2.7 | 2.8 |
| Nitzschia frustulum | 3 | + | 14.3 | 10.0 | 8.6 | 1.1 | 2.6 | 6.3 | 6.2 | 6.6 |
| Nitzschia paleacea | 2 | 7.5 | 11.0 | 11.3 | 6.1 | | 0.7 | 1.8 | 0.8 | 0.8 |
| Nitzschia perpusilla | 2 | 4.3 | 8.4 | 5.0 | 6.8 | | 3.5 | 2.9 | 1.3 | 5.8 |
| Nitzschia romana | 3 | 0.8 | 2.8 | 15.2 | 7.3 | 0.6 | 5.6 | 4.7 | 3.8 | 1.1 |
| Surirella ovata | 2 | 0.3 | + | 0.3 | + | 0.3 | + | 0.5 | 0.3 | |
| Synedra mazamaensis | 3 | 1.3 | 1.4 | 1.0 | 1.0 | + | 1.2 | 0.8 | 1.3 | 2.2 |

1. Range of cells 356–427
2. + indicates species present but not counted.
3. Predominantly variety *veneta*.

Table 20. Structure and composition of benthic diatom associations from the Lower Clark Fork River, Summer 1984, including Shannon Diversity Index and percent of cells[1] representing species in the three pollution tolerance groups of Lange-Bertalot (1979).

| | | CFR at Turah | Blackfoot River near mouth | CFR Blw. Milltown Dam | CFR Above Missoula | CFR Above Missoula WWTP | CFR Below Missoula WWTP | CFR at Shuffields | Bitterroot River Near Mouth | CFR at Harper Bridge | CFR 0.5 Mi. Blw. Champion |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Species Counted | | 28 | 34 | 32 | 31 | 35 | 27 | 29 | 28 | 23 | 24 |
| Species Diversity | | 3.053 | 3.941 | 3.743 | 3.376 | 3.759 | 3.483 | 3.233 | 2.876 | 2.775 | 2.684 |
| L-B Groups: | | | | | | | | | | | |
| 1. Most Tolerant | | 4.9 | 3.2 | 6.9 | 4.8 | 5.1 | 41.0 | 6.0 | 1.4 | 2.3 | 2.5 |
| 2. More Tolerant | | 25.4 | 26.7 | 20.1 | 27.7 | 30.8 | 36.5 | 33.6 | 10.9 | 27.6 | 15.4 |
| 3. Sensitive | | 69.2 | 69.9 | 72.5 | 67.6 | 63.6 | 22.8 | 60.3 | 87.6 | 69.7 | 82.1 |
| Major Species (%)[2] and L-B Group: | | | | | | | | | | | |
| Achnanthes deflexa | 3 | | 0.5 | + | + | + | + | | 3.9 | 2.7 | 0.2 |
| Achnanthes lanceolata | 2 | 0.2 | 0.5 | + | 0.2 | + | 0.2 | 0.2 | + | 0.2 | + |
| Achnanthes minutissima | 3 | 3.4 | 22.0 | 7.4 | 9.5 | 5.1 | 6.3 | 8.1 | 55.9 | 28.0 | 22.2 |
| Amphora perpusilla | 3 | 1.0 | 3.6 | 0.7 | 1.2 | 1.7 | + | + | + | 0.4 | + |
| Cocconeis placentula | 3 | 1.7 | 8.8 | 1.7 | 1.0 | 2.0 | 0.5 | 1.2 | 0.7 | 0.4 | 1.4 |
| Cymbella affinis | 3 | 12.6 | 11.0 | 12.8 | 6.2 | 6.4 | 6.8 | 36.0 | 2.1 | 30.0 | 46.8 |
| Cymbella microcephala | 2 | | 0.2 | | + | | | | | | |
| Epithemia sorex | 3 | 41.3 | 5.3 | 30.2 | 35.9 | 30.6 | 0.2 | 4.4 | 0.5 | + | 0.5 |
| Fragilaria capucina | 3 | + | +? | | | | | | | | |
| Fragilaria construens | 3 | + | 3.3 | 4.9 | + | 1.2 | + | 0.5 | 0.5 | + | 1.2 |
| Gomphonema olivaceum | 3 | 1.2 | 0.7 | 1.5 | 2.9 | 2.7 | 0.5 | 1.4 | | 0.4 | 2.1 |
| Gomphonema tenellum | 3 | + | 3.6 | 1.2 | 0.7 | 1.7 | 0.2 | 0.5 | 3.9 | + | 0.2 |
| Gomphonema tergistinum | 3 | | | | | | | | 3.7 | 0.4 | 1.2 |
| Navicula radiosa[3] | 2 | 0.5 | 14.8 | 2.7 | 5.2 | 7.6 | 2.3 | 4.9 | 0.2 | 4.5 | 1.9 |
| Navicula salinarum[4] | 2 | + | 0.7 | 0.2 | 0.2 | 0.2 | + | 0.2 | 1.4 | 0.4 | + |
| Nitzschia dissipata | 3 | 3.6 | 1.9 | 3.9 | 2.9 | 4.9 | 2.3 | 4.7 | 2.3 | 4.7 | 2.5 |
| Nitzschia palea | 1 | 0.2 | 0.2 | 0.7 | 0.7 | 0.5 | 24.0 | 1.6 | - | 0.2 | |
| Nitzschia paleacea | 2 | 16.7 | 5.5 | 6.9 | 16.9 | 14.0 | 7.5 | 20.7 | 3.9 | 19.9 | 9.0 |
| Nitzschia perpusilla | 2 | 3.6 | 1.2 | 6.9 | 2.9 | 4.4 | 22.9 | 1.9 | 1.9 | 0.9 | 1.9 |
| Stephanodiscus dubius | 3 | | | | | | | | | | |
| Stephanodiscus minutus | 2 | | | | | | | | | | |

Table 20 Continued

| | L-B Group | CFR 4 Mi. Below Champion | CFR at Huson | CFR at Lozeau | CFR Near St. Regis | Flathead River Near Mouth | CFR at Plains | CFR Above T. Falls Reservoir | CFR Below T. Falls Reservoir | CFR Below Noxon Reservoir | CFR Below Cabinet Gorge Res. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Species Counted | | 32 | 25 | [illegible] | 34 | 47 | 35 | 38 | 41 | 53 | 51 |
| Species Diversity | | 3.042 | 2.947 | 3.592 | 3.736 | 4.034 | 3.834 | 3.914 | 4.646 | 4.508 | 4.353 |
| L-B Groups: | | | | | | | | | | | |
| 1. Most Tolerant | | 3.2 | 3.2 | 4.3 | 10.1 | 3.5 | 5.8 | 5.8 | 7.6 | 4.1 | 0.7 |
| 2. More Tolerant | | 19.3 | 21.2 | 38.4 | 36.4 | 35.9 | 20.7 | 34.0 | 38.0 | 19.1 | 21.3 |
| 3. Sensitive | | 77.3 | 75.5 | 57.6 | 53.5 | 62.3 | 73.2 | 59.8 | 54.0 | 76.7 | 77.9 |
| Major Species (%[1]) and L-B Group: | | | | | | | | | | | |
| Achnanthes deflexa | 3 | 0.2 | + | | + | 3.3 | 0.5 | 0.2 | | 0.5 | 0.5 |
| Achnanthes lanceolata | 2 | 0.5 | + | 1.4 | 0.2 | 1.0 | + | 0.2 | 1.0 | 5.9 | 2.3 |
| Achnanthes minutissima | 3 | 17.8 | 28.7 | 12.8 | 23.3 | 26.0 | 15.8 | 16.7 | 11.1 | 24.5 | 28.2 |
| Amphora perpusilla | 3 | 0.2 | 0.9 | 0.9 | 0.5 | 3.3 | 2.6 | 0.7 | 0.5 | 3.6 | 0.2 |
| Cocconeis placentula | 3 | 1.8 | 0.7 | 1.2 | 1.1 | 5.0 | 3.1 | 2.1 | 3.4 | 0.5 | 2.3 |
| Cymbella affinis | 3 | 43.1 | 32.6 | 25.1 | 9.6 | 2.3 | 24.5 | 20.0 | 7.4 | 4.3 | 1.1 |
| Cymbella microcephala | 2 | | | | | 22.5 | 1.4 | 1.4 | 0.5 | 0.7 | 0.5 |
| Epithemia sorex | 3 | 1.1 | 0.9 | 1.9 | 7.3 | + | 7.5 | 7.1 | 3.0 | 8.6 | 3.4 |
| Fragilaria capucina | 3 | | | | | + | | | | 0.9? | 4.5 |
| Fragilaria construens | 3 | 1.6 | + | 0.9 | 1.1 | 2.3 | 3.3 | 0.7 | 5.4 | 6.6 | 7.5 |
| Gomphonema olivaceum | 3 | 1.1 | 2.1 | 1.2 | 0.5 | | 1.4 | 0.5 | 2.2 | + | 0.2 |
| Gomphonema tenellum | 3 | + | + | 1.2 | 0.5 | 2.0 | + | 0.7 | | 0.9 | 1.8 |
| Gomphonema tergestinum | 3 | 0.7 | 0.7 | 0.2 | + | | | | | +? | |
| Navicula radiosa[3] | 2 | 2.5 | 3.0 | 6.7 | 2.1 | 3.8 | 2.4 | 3.1 | 4.9 | 1.1 | 0.2 |
| Navicula salinarum | 2 | 0.5 | 0.2 | 1.2 | 0.9 | 1.0 | 1.9 | 2.1 | 6.9 | 2.0 | 1.6 |
| Nitzschia dissipata | 3 | 4.1 | 3.9 | 3.7 | 2.3 | 1.5 | 8.7 | 4.9 | 5.9 | 5.4 | 0.9 |
| Nitzschia palea | 1 | 0.2 | 0.7 | 0.2 | 1.8 | 1.3 | 0.7 | 1.2 | 2.7 | 0.7 | + |
| Nitzschia paleacea | 2 | 10.0 | 11.7 | 17.9 | 19.2 | 1.0 | 9.7 | 15.8 | 10.8 | + | 3.2 |
| Nitzschia perpusilla | 2 | 4.1 | 4.6 | 8.8 | 9.1 | | 0.9 | 4.2 | 2.2 | 0.5 | |
| Stephanodiscus dubius | 3 | | | | | | | | | 0.5 | 9.5 |
| Stephanodiscus minutus | 2 | | | | | | | | | | 3.4 |

1. Range of cells [illegible]
2. + indicates species present but not counted
3. Predominantly variety tenella.
4. Predominantly variety intermedia.

Table 20. Structure and composition of benthic diatom associations from the Lower Clark Fork River, Fall 1984, including Shannon Diversity Index and percent of cells[1] representing species in the three pollution tolerance groups of Lange-Bertalot (1979).

| | | CFR at Turah | Blackfoot River near mouth | CFR Milltown Dam | CFR Above Missoula | CFR Above Missoula WWTP | CFR Below Missoula WWTP | CFR at Shuffields | Bitterroot River Near Mouth | CFR at Harper Bridge | CFR .05 Mi. Blw. Champion |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Species Counted | | 31 | 43 | 41 | 39 | 41 | 35 | 31 | 32 | 23 | 26 |
| Species Diversity | | 4.022 | 4.326 | 4.146 | 3.791 | 4.292 | 3.730 | 3.755 | 3.099 | 3.144 | 3.209 |
| L-B Groups | | | | | | | | | | | |
| 1. Most Tolerant | | 4.5 | 15.4 | 6.2 | 7.1 | 9.3 | 56.0 | 4.8 | 1.4 | 1.9 | 4.7 |
| 2. More Tolerant | | 34.7 | 27.1 | 36.3 | 20.9 | 37.2 | 27.1 | 23.8 | 18.7 | 14.7 | 12.2 |
| 3. Sensitive | | 61.5 | 57.6 | 58.0 | 72.3 | 53.8 | 17.1 | 71.7 | 80.2 | 83.4 | 82.7 |
| Major Species (%)[2] and L-B Group: | | | | | | | | | | | |
| Achnanthes lanceolata | 2 | 0.6 | 0.9 | 0.5 | 0.8 | 0.9 | 0.8 | | 0.6 | + | + |
| Achnanthes minutissima | 3 | 3.6 | 11.0 | 7.6 | 8.7 | 5.1 | 1.6 | 2.1 | 46.7 | 11.5 | 5.5 |
| Amphora veneta | 1 | | | | | | 18.6 | 0.3 | | | |
| Cocconeis placentula | 3 | 1.2 | 6.7 | 3.4 | 1.4 | 4.3 | | 1.3 | 2.5 | 0.6 | 0.7 |
| Cyclotella meneghiniana | 2 | 1.2 | | 0.8 | 1.1 | 1.9 | 0.5 | | 0.3 | | 0.5 |
| Cymbella affinis | 3 | 7.6 | 9.0 | 12.5 | 5.2 | 1.9 | 1.3 | 22.2 | 10.2 | 28.7 | 37.2 |
| Cymbella microcephala | 2 | | 0.3 | | | | | | | | |
| Cymbella minuta | 2 | 1.5 | 3.5 | 1.0 | 0.3 | 1.3 | 1.0 | 2.6 | 5.1 | 2.0 | 1.5 |
| Diatoma vulgare | 3 | 9.4 | 2.6 | 5.0 | 7.1 | 4.6 | 0.8 | 5.0 | 3.4 | 2.0 | 6.0 |
| Epithemia sorex | 3 | 17.6 | 1.2 | 7.0 | 31.7 | 12.7 | 0.3 | 3.4 | 0.3 | 0.8 | 1.0 |
| Fragilaria construens | 3 | 0.3 | 2.9 | 2.3 | 2.5 | 1.9 | 0.8 | 0.5 | 0.3 | 1.7 | 1.2 |
| Fragilaria vaucheriae | 2 | 13.0 | 1.2 | 3.7 | 3.3 | 2.7 | 1.6 | 2.6 | + | 0.6 | 0.7 |
| Melosira varians | 2 | 0.3 | | | | | | | | | |
| Navicula accomoda | 1 | | | | | | 8.1 | | | | |
| Navicula salinarum[3] | 2 | 0.9 | 1.7 | 0.8 | 0.3 | 1.1 | | 0.8 | 0.3 | 1.4 | 0.2 |
| Navicula subminuscula | 1 | | | | | | 21.8 | | | | |
| Nitzschia dissipata | 3 | 5.8 | 2.0 | 6.0 | 5.5 | 6.2 | 1.8 | 15.1 | 2.0 | 7.3 | 9.4 |
| Nitzschia fonticola | 3 | 1.5 | 3.2 | 3.7 | 2.5 | 6.2 | 3.7 | 0.8 | | | |
| Nitzschia frustulum | 3 | | | | | | 0.5 | 0.5 | | | |
| Nitzschia paleacea | 2 | 10.6 | 17.7 | 23.0 | 9.8 | 20.2 | 7.3 | 13.8 | 10.2 | 7.6 | 5.7 |
| Nitzschia perpusilla | 2 | 2.7 | + | 1.0 | 1.4 | 1.3 | 11.3 | 0.8 | 0.8 | 0.8 | 1.7 |
| Nitzschia romana | 3 | | | | | | 5.2 | 10.7 | 4.0 | 26.1 | 17.4 |
| Synedra rumpens | 3 | | 0.9 | 0.5 | 0.3 | 0.3 | + | | | + | |
| Synedra ulna | 1 | 3.6 | 11.9 | 3.7 | 5.2 | 6.5 | 0.3 | [illegible] | + | 1.1 | 2.0 |

| | | CFR 4 Mi. Below Champion | CFR at Huson | CFR at Lozeau | CFR Near St. Regis | Flathead River Near Mouth | CFR at Plains | CFR Above T. Falls Reservoir | CFR Below T. Falls Reservoir | CFR Below Noxon Reservoir | CFR Below Cabinet Gorge Res. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Species Counted | | 30 | 25 | 32 | 34 | 39 | 37 | 38 | 43 | 57 | 56 |
| Sopecies Diversity | | [illegible].690 | 3.028 | 3.913 | 4.085 | 3.318 | 4.008 | 4.068 | 4.405 | 4.867 | 4.725 |
| L-B Groups | | | | | | | | | | | |
| 1. Most Tolerant | | 6.7 | 4.8 | 13.4 | 9.4 | 7.4 | 9.2 | 4.4 | 7.0 | 6.1 | 4.7 |
| 2. More Tolerant | | 16.6 | 14.5 | 20.2 | 31.4 | 20.0 | 37.1 | 28.2 | 39.5 | 34.2 | 23.1 |
| 3. Sensitive | | 76.8 | 80.9 | 66.1 | 59.2 | 73.1 | 53.6 | 68.0 | 53.9 | 60.4 | 72.1 |
| Major Species (%)[2] and L-B Group: | | | | | | | | | | | |
| Achnanthes lanceolata | 2 | 0.7 | 0.3 | 0.5 | 1.2 | 2.3 | 0.5 | 0.6 | 1.5 | 4.0 | 7.3 |
| Achnanthes minutissima | 3 | 7.6 | 5.6 | 7.9 | 7.8 | 49.3 | 8.6 | 20.4 | 9.2 | 11.2 | 12.7 |
| Amphora veneta | 1 | | | | | | | | | | |
| Cocconeis placentula | 3 | 2.8 | 0.8 | 2.5 | 5.8 | 2.0 | 3.8 | 3.6 | 2.0 | 2.1 | 3.7 |
| Cyclotella meneghiniana | 2 | 0.7 | 0.3 | 1.2 | 1.8 | | 0.8 | 0.3 | 3.3 | 8.8 | 4.2 |
| Cymbella affinis | 3 | 25.8 | 36.3 | 13.5 | 12.9 | 0.3 | 12.4 | 10.5 | 9.4 | 3.2 | 0.6 |
| Cymbella microcephala | 2 | | | | | 8.3 | 0.5 | 3.6 | 1.3 | + | 0.6 |
| Cymbella minuta | 2 | 0.9 | 0.3 | | 0.7 | 1.1 | 0.8 | 0.6 | 1.0 | 1.3 | 0.6 |
| Diatoma vulgare | 3 | 2.8 | 5.6 | 4.7 | 1.8 | | 2.2 | 1.4 | 3.3 | 0.5 | |
| Epithemia sorex | 3 | 1.8 | 1.6 | 1.7 | 3.9 | | 3.0 | 5.2 | 1.3 | 1.6 | 1.1 |
| Fragilaria construens | 3 | 0.9 | 0.3 | 1.5 | 2.5 | 3.7 | 2.7 | 2.2 | 3.8 | 9.8 | 10.7 |
| Fragilaria vaucheriae | 2 | 0.5 | | 0.5 | | 0.6 | 2.2 | 3.3 | 3.3 | 0.5 | 0.3 |
| Melosira varians | 2 | | + | | | | | | + | 5.3 | 1.7 |
| Navicula accomoda | 1 | | | | | | | | | | |
| Navicula salinarum[3] | 2 | 2.1 | 1.6 | 2.9 | 3.0 | + | 1.6 | 2.5 | 5.1 | 3.5 | 0.8 |
| Navicula subminuscula | 1 | | | | | | | | | | |
| Nitzschia dissipata | 3 | 8.8 | 6.1 | 8.4 | 6.2 | 2.3 | 4.3 | 8.6 | 6.4 | 5.1 | 6.8 |
| Nitzschia fonticola | 3 | | | | | | | | | | + |
| Nitzschia frustulum | 3 | | | 0.5 | 0.2 | 2.0 | | 2.5 | 1.0 | 6.4 | 10.2 |
| Nitzschia paleacea | 2 | 7.6 | 10.4 | 12.5 | 20.7 | 2.0 | 28.0 | 15.5 | 21.9 | 3.5 | 2.5 |
| Nitzschia perpusilla | 2 | 0.7 | 1.1 | 1.5 | 1.4 | | 0.5 | 0.3 | 0.8 | 0.5 | 0.3 |
| Nitzschia romana | 3 | 18.2 | 21.1 | 17.7 | 8.1 | 0.9 | 4.6 | 3.3 | 2.6 | 2.7 | 0.6 |
| Synedra rumpens | 3 | + | | | + | 3.1 | 1.1 | 0.6 | 1.0 | 1.1 | 0.8 |
| Synedra ulna | 1 | 2.8 | 3.2 | 9.1 | 5.3 | 3.7 | 4.9 | 1.1 | 2.3 | 0.8 | 0.6 |

1. Range of cells 33[illegible]
2. + indicates species present but not counted.
3. Predominantly variety *intermedia*.

Table 20. Structure and composition of benthic diatom associations from the Lower Clark Fork River, Spring 1985, including Shannon Diversity Index and percent of cells representing species in the three pollution tolerance groups of Lange-Bertalot (1979).

| | | CFR at Turah | Blackfoot River near mouth | CFR Blw. Milltown Dam | CFR Above Missoula | CFR Above Missoula WWTP | CFR Below Missoula WWTP | CFR at Shuffields | Bitterroot River Near Mouth | CFR at Harper Bridge | CFR 0.5 Mi. Blw. Champion |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Species Counted: | | 26 | 27 | 35 | 27 | 34 | 32 | 26 | 33 | 31 | 29 |
| Species Diversity | | 2.930 | 3.486 | 3.389 | 3.263 | 3.901 | 3.787 | 3.435 | 3.294 | 3.784 | 3.932 |
| L-B Groups: | | | | | | | | | | | |
| 1. Most Tolerant | | 1.9 | 6.4 | 4.4 | 5.8 | 7.2 | 22.9 | 4.3 | 1.1 | 2.6 | 7.9 |
| 2. More Tolerant | | 38.2 | 42.9 | 43.0 | 37.9 | 43.6 | 34.6 | 37.0 | 52.7 | 24.2 | 27.2 |
| 3. Sensitive | | 59.9 | 50.5 | 52.0 | 56.2 | 49.1 | 42.0 | 58.9 | 46.3 | 73.0 | 64.9 |
| Major Species (%)[2] and L-B Group: | | | | | | | | | | | |
| Achnanthes minutissima | 3 | 3.3 | 6.2 | 3.5 | 2.3 | 4.0 | 0.9 | 2.5 | 15.5 | 12.9 | 12.0 |
| Cymbella affinis | 3 | 0.5 | 3.7 | 2.9 | 2.8 | 1.4 | 0.2 | 19.6 | 0.5 | 12.7 | 9.2 |
| Cymbella microcephala | 2 | | 0.2 | | | | | | | | |
| Cymbella minuta | 2 | 8.4 | 6.7 | 2.7 | 3.0 | 6.7 | 1.9 | 3.2 | 39.8 | 10.0 | 10.4 |
| Diatoma tenue | 2 | 0.2 | 0.5 | 2.9 | 4.2 | 6.3 | 0.5 | 7.0 | | 1.2 | 1.4 |
| Epithemia sorex | 3 | 4.0 | 0.2 | 0.2 | 2.8 | 2.6 | | 0.7 | + | 1.0 | 0.2 |
| Fragilaria capucina | 3 | + | | | | | | | | | |
| Fragilaria construens | 3 | 0.5 | 0.5 | 1.8 | 0.5 | 3.0 | 0.9 | + | 0.9 | 0.2 | 1.1 |
| Fragilaria vaucheriae | 2 | 22.2 | 30.9 | 27.4 | 23.3 | 19.5 | 6.1 | 18.1 | 1.9 | 5.5 | 6.2 |
| Gomphonema olivaceum | 3 | 39.3 | 17.8 | 25.2 | 32.2 | 16.0 | 12.9 | 15.6 | | 4.8 | 6.0 |
| Navicula cryptocephala[3] | 1 | 0.5 | 1.8 | 1.1 | 2.6 | 3.3 | 0.2 | [illegible] | +? | 1.7 | 6.9 |
| Navicula subminuscula | 1 | | | + | | | 8.9 | | | | + |
| Nitzschia dissipata | 3 | 8.4 | 3.5 | 10.8 | 9.1 | 12.1 | 7.7 | [illegible] | 7.2 | 10.3 | 13.1 |
| Nitzschia frustulum | 3 | 0.5 | 2.1 | 2.4 | 1.9 | 3.0 | 14.3 | 0.7 | 2.8 | 12.4 | 8.8 |
| Nitzschia paleacea | 2 | 1.2 | 3.5 | 7.7 | 5.4 | 8.1 | 6.1 | 7.4 | 4.9 | 1.9 | 4.4 |
| Nitzschia perpusilla | 2 | | 0.9 | 1.1 | 1.4 | 0.5 | 18.5 | + | 4.6 | 1.9 | 1.4 |
| Nitzschia romana | 3 | + | 0.2 | | + | 0.5 | 3.3 | 9.3 | 6.5 | 14.1 | 8.9 |
| Synedra mazamaensis | 3 | 0.5 | 5.8 | 1.3 | 0.5 | 1.4 | | + | 2.5 | 0.5 | 0.5 |
| Synedra ulna | 1 | 1.4 | 4.2 | 0.9 | 3.0 | 2.3 | 0.2 | 1.4 | + | 0.2 | 0.7 |

Table 20. Continued

| | | CFR 4 Mi. Below Champion | CFR at Huson | CFR at Lozeau | CFR Near St. Regis | Flathead River Near Mouth | CFR at Plains | CFR Above T. Falls Reservoir | CFR Below T. Falls Reservoir | CFR Below Noxon Reservoir | CFR Below Cabinet Gorge Res. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Species Counted: | | 35 | 28 | 33 | 27 | 39 | 32 | 42 | 39 | 52 | 40 |
| Species Diversity | | 4.072 | 3.995 | 4.173 | 3.862 | 3.606 | 3.796 | 4.496 | 4.096 | 4.512 | 3.794 |
| L-B Groups: | | | | | | | | | | | |
| 1. Most Tolerant | | 9.1 | 6.0 | 14.4 | 13.2 | 2.0 | 16.3 | 15.8 | 8.9 | 11.7 | 5.9 |
| 2. More Tolerant | | 31.9 | 22.6 | 21.2 | 20.3 | 34.4 | 26.3 | 34.0 | 24.8 | 33.0 | 22.7 |
| 3. Sensitive | | 58.9 | 71.2 | 64.1 | 66.4 | 63.4 | 57.5 | 50.0 | 66.4 | 55.8 | 71.2 |
| Major Species (%)[2] and L-B Group: | | | | | | | | | | | |
| Achnanthes minutissima | 3 | 7.2 | 9.3 | 4.1 | 3.7 | 40.2 | 16.1 | 6.8 | 25.9 | 15.4 | 39.9 |
| Cymbella affinis | 3 | 6.8 | 12.8 | 5.5 | 5.6 | 3.7 | 8.2 | 2.5 | 1.9 | 4.0 | 4.0 |
| Cymbella microcephala | 2 | | | | | 4.5 | 0.3 | 0.8 | 0.6 | | + |
| Cymbella minuta | 2 | 14.2 | 4.9 | 5.5 | 1.9 | 2.0 | 2.3 | 0.6 | 0.3 | 1.7 | 1.1 |
| Diatoma tenus | 2 | 1.4 | 0.5 | 2.3 | 3.7 | 6.5 | 4.2 | 9.3 | 8.1 | 13.1 | 6.7 |
| Epithemia sorex | 3 | 1.2 | 1.6 | 0.7 | 0.9 | | 0.3 | 0.8 | 0.6 | 0.6 | 1.1 |
| Fragilaria capucina | 3 | + | | | | | +? | + | | 6.3 | |
| Fragilaria construens | 3 | 1.2 | 0.7 | 1.8 | 0.7 | 2.3 | 1.1 | 3.7 | 3.1 | 7.4 | 5.4 |
| Fragilaria vaucheriae | 2 | 6.8 | 5.1 | 1.6 | 1.4 | 12.5 | 16.4 | 11.3 | 8.6 | 6.0 | 5.9 |
| Gomphonema olivaceum | 3 | 11.7 | 5.6 | 8.5 | 4.2 | 0.8 | 5.9 | 7.1 | 1.7 | 1.1 | 0.5 |
| Navicula cryptocephala[3] | 1 | 7.2 | 4.9 | 11.9 | 8.8 | 0.8 | 11.6 | 7.6 | 3.6 | 0.6 | 1.1 |
| Navicula subminuscula | 1 | | | | | | | | | | |
| Nitzschia dissipata | 3 | 13.0 | 12.8 | 14.7 | 15.8 | 1.7 | 11.0 | 8.8 | 11.7 | 3.7 | 1.3 |
| Nitzschia frustulum | 3 | 1.6 | 8.8 | 4.6 | 11.4 | 0.6 | 0.6 | 0.8 | 1.1 | 1.1 | 0.8 |
| Nitzschia paleacea | 2 | 4.2 | 3.5 | 7.8 | 10.4 | + | 2.0 | 6.2 | 3.3 | 0.3 | 1.1 |
| Nitzschia perpusilla | 2 | 2.1 | 4.6 | 1.8 | 1.6 | | 0.3 | 1.4 | 0.8 | | |
| Nitzschia romana | 3 | 8.4 | 11.1 | 10.8 | 15.1 | 0.8 | 5.4 | 2.5 | 2.5 | 0.3 | 0.3 |
| Synedra mazamaensis | 3 | 1.2 | 0.2 | 0.5 | + | | 0.3 | 0.6 | 0.8 | + | 0.3 |
| Synedra ulna | 1 | 0.7 | 0.7 | 2.3 | 4.4 | 0.6 | 4.8 | 7.9 | 5.3 | 9.1 | 3.8 |

1. Range of cells 350-452
2. + indicates species present but not counted
3. Predominantly variety veneta.

Table 21. Relative abundance and estimated rank by volume (in parentheses) of diatoms and genera of soft-bodied algae in composite samples of periphyton from natural substrates, March 5-9, 1984. R=rare; C=common; VC=very common; A=abundant; VA = very abundant; VVA = very very abundant.

| | CFR at Turah | Blackfoot River near mouth | CFR Blw. Milltown Dam | CFR Above Missoula | CFR Above Missoula WWTP | CFR Below Missoula WWTP | CFR at Shuffields | Bitterroot River Near Mouth | CFR at Harper Bridge | CFR 0.5 Mi. Blw. Champion |
|---|---|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | | | |
| *Ankistrodesmus* | | | | | | | | | | |
| *Cladophora* | | | R(5) | | R | R | R(4) | VC(3) | R | |
| *Closterium* | | | | | | | | R | | |
| *Coelastrum* | | | | | | | | | | |
| *Cosmarium* | | | | | | | | | | |
| *Mougeotia* | | | | | | | | | | |
| *Oedogonium* | | | | | | R | | | | |
| *Pediastrum* | | | | | | | | | | |
| *Scenedesmus* | | | | | | R | | R | | |
| *Spirogyra* | | | | | | | | | | |
| *Staurastrum* | | | | | | | | | | |
| *Stigeoclonium* | R | R(3) | | | | C(5) | R | | | R |
| *Ulothrix* | VC(2) | C(2) | C(3) | VC(3) | VC(3) | C(4) | C(3) | C(5) | C(4) | C(3) |
| Golden-Brown Algae (Chrysophyta) | | | | | | | | | | |
| *Dinobryon* | | | | | | | | | | |
| *Hydrurus* | VA(1) | R | A(2) | VA(1) | A(2) | C(3) | C(2) | R | VC(2) | C(2) |
| *Tribonema* | | | | | | | | R | | |
| Diatoms (Bacillariophyta) | VC(3) | VVA(1) | VA(1) | VA(2) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) |
| Red Algae (Rhodophyta) | | | | | | | | | | |
| *Audouinella* | R | R | C(4) | R(4) | VC(4) | R | R | | | |
| Blue-green Algae (Cyanophyta) | | | | | | | | | | |
| *Chamaesiphon* | | | | | | | | VC(6) | | |
| *Chroococcus* | | | | | | | | | | |
| *Lyngbya* | | | | | | | R | | | |
| *Oscillatoria* | | R | R(7) | R | | VA(2) | C(5) | VA(2) | VC(3) | C(4) |
| *Phormidium* | R | R | C(6) | R | C(5) | A(6) | | A(4) | C(5) | R |
| *Rivularia* | | R | | | R | | | | | |
| *Tolypothrix* | | | | | | | | | | |

Table 21.

| | CFR at Huson | CFR at Ninemile | CFR at Alberton | CFR at Tarkio | CFR at Lozeau | CFR at Superior | CFR at St. Regis | CFR Above Flathead R. |
|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | |
| <u>Ankistrodesmus</u> | | | | | | | | |
| <u>Cladophora</u> | | R(5) | | | | | | R(7) |
| <u>Closterium</u> | | | | | | | R | |
| <u>Coelastrum</u> | | | | | | | R | |
| <u>Cosmarium</u> | | | | | | | R | |
| <u>Mougeotia</u> | | | | | | | R | |
| <u>Oedogonium</u> | | | | | | | | |
| <u>Pediastrum</u> | | | | | | | | R |
| <u>Scenedesmus</u> | | | R | | R | | R | |
| <u>Spirogyra</u> | | | | | | | | |
| <u>Staurastrum</u> | | | | | | | | R |
| <u>Stigeoclonium</u> | R | R | | | R | C(5) | C(6) | C(6) |
| <u>Ulothrix</u> | R(4) | C(4) | C(4) | R | C(4) | VC(2) | VC(2) | A(2) |
| Golden-Brown Algae (Chrysophyta) | | | | | | | | |
| <u>Dinobryon</u> | | | | | | | | |
| <u>Hydrurus</u> | A(2) | | VC(2) | A(2) | VC(3) | C(3) | VC(5) | VC(3) |
| <u>Tribonema</u> | | | | | | | | |
| Diatoms (Bacillariophyta) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) |
| Red Algae (Rhodophyta) | | | | | | | | |
| <u>Audouinella</u> | | R | R | | C(5) | R | R | C(5) |
| Blue-green Algae (Cyanophyta) | | | | | | | | |
| <u>Chamaesiphon</u> | | | | | | | | |
| <u>Chroococcus</u> | | | | | | VC(7) | | VA(4) |
| <u>Lyngbya</u> | | | | | | | | |
| <u>Oscillatoria</u> | C(3) | VC(2) | C(5) | | A(2) | VC(4) | VC(3) | R |
| <u>Phormidium</u> | C(5) | A(3) | A(3) | | VC(6) | C(6) | A(4) | R |
| <u>Rivularia</u> | | | R | | | | | |
| <u>Tolypothrix</u> | | | | | C(7) | | | |

Table 21.

| | Flathead River Near Mouth | CFR at Plains | CFR Above T. Falls Reservoir | CFR Below T. Falls Dam | CFR Below Noxon Dam |
|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | |
| *Ankistrodesmus* | R | | R | R | |
| *Cladophora* | | | | | |
| *Closterium* | R | | R | | R |
| *Coelastrum* | | | | | |
| *Cosmarium* | | | | R | |
| *Mougeotia* | R | | R(7) | | |
| *Oedogonium* | | | R(6) | | R |
| *Pediastrum* | | R | | R | |
| *Scenedesmus* | | | R | | |
| *Spirogyra* | | | C(3) | R | C(4) |
| *Staurastrum* | | R | C | | |
| *Stigeoclonium* | C(2) | R | R(8) | C(4) | |
| *Ulothrix* | R(3) | VC(3) | VC(2) | VC(2) | A(2) |
| Golden-Brown Algae (Chrysophyta) | | | | | |
| *Dinobryon* | R | | | | |
| *Hydrurus* | | A(2) | R(4) | | |
| *Tribonema* | | | | | |
| Diatoms (Bacillariophyta) | VC(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) |
| Red Algae (Rhodophyta) | | | | | |
| *Audouinella* | | | R(5) | VC(3) | R |
| Blue-green Algae (Cyanophyta) | | | | | |
| *Chamaesiphon* | | | | | |
| *Chroococcus* | | | | R | R |
| *Lyngbya* | | | | | C(5) |
| *Oscillatoria* | R | C(4) | R | | A(3) |
| *Phormidium* | | | | | C(6) |
| *Rivularia* | | | | | |
| *Tolypothrix* | | | | | |

Table 21. Relative abundance and estimated rank by volume (in parentheses) of diatoms and genera of soft-bodied algae in composite samples of periphyton from natural substrates, July 31 to August 3, 1984. R=rare; C=common; VC=very common; A=abundant; VA = very abundant; VVA = very very abundant.

| | CFR at Turah | Blackfoot River near mouth | CFR Blw. Milltown Dam | CFR Above Missoula | CFR Above Missoula WWTP | CFR Below Missoula WWTP | CFR at Shuffields | Bitterroot River Near Mouth | CFR at Harper Bridge | CFR 0.5 Mi. Blw. Champion |
|---|---|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | | | |
| *Ankistrodesmus* | | | | | | | | | | |
| *Botryococcus* | | R | | | | | | | | |
| *Bulbochaete* | | | | | | | | | | |
| *Cladophora* | C(2) | | VC(2) | VC(3) | C(2) | R(6) | C(3) | C(3) | C(2) | C(3) |
| *Closterium* | R | R(8) | R(7) | | R(7) | R(8) | R(9) | R(8) | | R(10) |
| *Cosmarium* | R | R(9) | R(8) | R(10) | R(8) | R(10) | R(10) | R(9) | C(7) | C(7) |
| *Gongrosira* | | R | | | | | | | | |
| *Mougeotia* | | | | | | | | | | |
| *Nephrocytium* | | | | | | | | | | |
| *Oedogonium* | | | | | | | | | | |
| *Pediastrum* | | R | | | | R(9) | | | | |
| *Pseudoulvella* | | | | | | | | | | |
| *Scenedesmus* | | R | | R(11) | R(9) | R(11) | C(8) | C(7) | C(8) | C(8) |
| *Spirogyra* | | VC(2) | | | | | | | | |
| *Staurastrum* | | R | | | | | | | | |
| *Stigeoclonium* | VC(4) | C(5) | C(4) | A(4) | R(5) | A(1) | VC(4) | C(4) | VC(3) | A(2) |
| *Ulothrix* | C(5) | | R(6) | R(6) | | | C(6) | C(6) | R(5) | R(6) |
| Golden-brown Algae (Chrysophyta) | | | | | | | | | | |
| *Hydrurus* | | | R(5) | R(5) | | R(5) | C(2) | | | |
| Diatoms (Bacillariophyta) | VA(1) | VC(1) | VA(1) | VVA(1) | VA(1) | VA(2) | VA(1) | VA(1) | VA(1) | VVA(1) |
| Red Algae (Rhodophyta) | | | | | | | | | | |
| *Audouinella* | VC(3) | C(6) | A(3) | A(2) | VC(3) | R(7) | VC(5) | | R(6) | R(9) |
| *Lemanea* | | C(3) | | | | | | | | |
| Blue-green Algae (Cyanophyta) | | | | | | | | | | |
| *Calothrix* | R | R | | R(9) | C(4) | | | | | |
| *Coelosphaerium* | | | | | | | | | | |
| *Dactylococcopsis* | | | | | | | R(13) | | | R(11) |
| *Dichothrix* | | | | | | | | | | |
| *Merismopedia* | | | | | | | | | | |
| *Nostoc* | | R(10) | | | R(6) | | | | | |
| *Oscillatoria* | R | C(7) | | R(8) | | A(3) | C(7) | A(2) | VC(4) | VC(4) |
| *Phormidium* | R | R | | C(7) | | A(4) | R(11) | VC(5) | | VC(5) |
| *Rivularia* | | VC(4) | | | | | R(12) | | | |
| *Tolypothrix* | R | | | | | | | | | |

Table 21. Continued

| | CFR 4 Mi. Blw. Champion | CFR at Huson | CFR at Lozeau | CFR near St. Regis | Flathead River Nr. Mouth | CFR at Plains | CFR Abv. T. Falls Reservoir | CFR Blw. T. Falls Dam | CFR Blw. Noxon Dam | CFR Blw. Cabinet Gorge Dam |
|---|---|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | | | |
| Ankistrodesmus | | | | | | | | R | | |
| Botryococcus | | | | | | | | | | |
| Bulbochaete | | | | | VC(3) | | | | | |
| Cladophora | C(3) | C(4) | R(5) | | R(9) | | R(9) | | R(3) | C(2) |
| Closterium | | R(9) | | C(5) | R(13) | C(6) | C(6) | C(4) | R(8) | |
| Cosmarium | R(9) | C(6) | C(4) | C(6) | R(14) | C(7) | VC(4) | C(5) | | |
| Gongrosira | | | | | | | | | | |
| Mougeotia | | | | | R(10) | VC(3) | C(3) | R(9) | R(5) | |
| Nephrocytium | | | | | R | | | | | |
| Oedogonium | R(6) | | | | VC(2) | | R(12) | R(8) | R(4) | |
| Pediastrum | R(11) | | | | | R(12) | R | R(15) | R(10) | |
| Pseudoulvella | | | | | R(12) | | | | | |
| Scenedesmus | C(8) | C(8) | C(3) | C(7) | C(8) | C(9) | VC(10) | VC(6) | C(6) | |
| Spirogyra | | | | | C(4) | | | R(7) | A(1) | A(1) |
| Staurastrum | | | R | | | R(14) | R | R | | |
| Stigeoclonium | VC(2) | A(2) | R | VA(1) | R(11) | A(2) | VA(1) | VC(3) | | R(6) |
| Ulothrix | C(4) | | | | | R(11) | R(13) | | | |
| Golden-brown Algae (Chrysophyta) | | | | | | | | | | |
| Hydrurus | | | | | | | | | | |
| Diatoms (Bacillariophyta) | VVA(1) | VVA(1) | VC(2) | A(2) | VC(6) | VA(1) | A(2) | A(1) | A(2) | C(4) |
| Red Algae (Rhodophyta) | | | | | | | | | | |
| Audouinella | R(10) | R(10) | R | VC(4) | | C(4) | | | | |
| Lemanea | | | | | | | | | | |
| Blue-green Algae (Cyanophyta) | | | | | | | | | | |
| Calothrix | | C(7) | | R(8) | | R(13) | C(8) | | | |
| Coelosphaerium | | | | | R | | | R | R(12) | |
| Dactylococcopsis | R(12) | R(11) | R | R(10) | | R(15) | C(11) | C(14) | | C(9) |
| Dichothrix | | | | | VC(5) | | [illegible] | A(2) | R(9) | R(5) |
| Merismopedia | R(13) | | | | [illegible] | | | R | | |
| Nostoc | | | | | A(1) | | | | | VC(3) |
| Oscillatoria | VC(5) | VC(5) | R(6) | | C(7) | R(8) | R | R(11) | R(7) | [illegible] |
| Phormidium | C(7) | A(3) | | R(9) | | R(10) | | R(12) | | R(8) |
| Rivularia | | | A(1) | A(3) | | | C(7) | R(13) | R(11) | |
| Tolypothrix | | | | | | [illegible] | | R(10) | | |

Table 21. Relative abundance and estimated rank by volume (in parentheses) of diatoms and genera of soft-bodied algae in composite samples of periphyton from natural substrates, October 30 to November 2, 1984. R=rare; C=common; VC=very common; A=abundant; VA = very abundant; VVA = very very abundant.

| | CFR at Turah | Blackfoot River near mouth | CFR Blw. Milltown Dam | CFR Above Missoula | CFR Above Missoula WWTP | CFR Below Missoula WWTP | CFR at Shuffields | Bitterroot River Near Mouth | CFR at Harper Bridge | CFR 0.5 Mi. Blw. Champion |
|---|---|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | | | |
| Ankistrodesmus | | | | | | | | R(1) | | |
| Chaetophora | | | | | | | | | | |
| Cladophora | C(3) | | C(4) | R(5) | C(2) | | C(4) | C(3) | C(5) | C(3) |
| Closterium | R | | R | R(10) | R(9) | R(8) | R(10) | R(10) | | |
| Coelastrum | | | | | | | | R(12) | | |
| Cosmarium | R(6) | | R | | C(6) | R(10) | R(11) | | | R |
| Gloeocystis | | | | | | R(11) | | | | |
| Mougeotia | | | | | | | | | | |
| Oedogonium | | | | R(8) | | C(5) | | | | |
| Pediastrum | | R(8) | | R(9) | | R(9) | | | | R |
| Scenedesmus | R | C(7) | C(6) | C(6) | C(7) | C(7) | C(8) | C(8) | C(6) | C(7) |
| Sphaerocystis | | | | | | | | | | |
| Spirogyra | | VC(2) | | | | | R(7) | | | |
| Staurastrum | R | R(9) | R | | | | | C(7) | R(8) | C(6) |
| Stigeoclonium | C(5) | C(4) | R(7) | VC(3) | C(4) | VC(3) | VC(3) | R(9) | VC(2) | VC(2) |
| Ulothrix | VC([illegible]) | VC(3) | C(5) | C(4) | R(5) | C(4) | VC(2) | C(4) | C(4) | C(4) |
| Zygnema | | | | | | | | | | |
| Golden-brown Algae (Chrysophyta) | | | | | | | | | | |
| Hydrurus | | | R | | | | | | | |
| Vaucheria | | | R(9) | | | | | | | |
| Diatoms (Bacillariophyta) | VVA(1) | VA(1) | VA(1) | VA(1) | VA(1) | VA(2) | VVA(1) | VVA(1) | VVA(1) | VVA(1) |
| Red Algae (Rhodophyta) | | | | | | | | | | |
| Audouinella | VA(2) | C(5) | VC(3) | A(2) | VC(3) | | | | | R |
| Blue-green Algae (Cyanophyta) | | | | | | | | | | |
| Calothrix | | | | | | | | | R(9) | |
| Chroococcus | | | | | | | | | | |
| Dactylococcopsis | | VC(6) | C | C(7) | C(8) | R(12) | C(9) | A(5) | C(7) | C(8) |
| Dichothrix | | | | | | | | | | |
| Nostoc | | | VC(2) | | | | | | | |
| Oscillatoria | | R(10) | | | | VA(1) | C(6) | VC(2) | VC(3) | C(5) |
| Phormidium | | | | | | C(6) | VC(5) | C(5) | | |
| Rivularia | | | R(8) | | | | R(12) | | | |
| Tolypothrix | | | | | | | | | | |

Table 21. Continued

| | CFR 4 Mi. Blw. Champion | CFR at Huson | CFR at Lozeau | CFR near St. Regis | Flathead River Nr. Mouth | CFR at Plains | CFR Abv. T. Falls Reservoir | CFR Blw. T. Falls Dam | CFR Blw. Noxon Dam | CFR Blw. Cabinet Gorge Dam |
|---|---|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | | | |
| Ankistrodesmus | | | | | | | | | | |
| Chaetophora | | | | C(3) | | R(12) | | | | |
| Cladophora | C(3) | C(3) | R(5) | | | R(9) | R(6) | | R(5) | R(11) |
| Closterium | R(8) | R(9) | R(10) | R(8) | R(10) | | R(13) | R(8) | R(12) | R(9) |
| Coelastrum | | | | | R | | R(15) | | R | R(14) |
| Cosmarium | R(11) | R(13) | R(12) | R(10) | R(12) | | | R(9) | | R(12) |
| Gloeocystis | | | | | | | | | | |
| Mougeotia | | | | | A(3) | R(11) | R(10) | R(6) | R(9) | C(4) |
| Oedogonium | R(7) | R(8) | | | R(8) | R(10) | C(5) | | R(11) | C(5) |
| Pediastrum | | R(12) | R(11) | R(12) | R | R(14) | | | R | R(10) |
| Scenedesmus | C(9) | C(7) | VC(4) | C(5) | C(9) | C(8) | VC(8) | VC(4) | C(6) | VC(7) |
| Sphaerocystis | | | | | | | | | C(7) | R(13) |
| Spirogyra | | | | | VC(5) | VC(2) | R(7) | C(2) | | VC(3) |
| Staurastrum | C(6) | C(6) | C(3) | R(9) | R(11) | | R(14) | | | |
| Stigeoclonium | VC(2) | VC(2) | R(7) | R(7) | | | C(4) | | | |
| Ulothrix | C(4) | C(4) | C(2) | R(6) | VC(6) | VC(3) | VC(2) | C(3) | R(10) | |
| Zygnema | | | | | R | | | | | |
| Golden-brown Algae (Chrysophyta) | | | | | | | | | | |
| Hydrurus | | | | R(11) | | | | | | |
| Vaucheria | | | | | | | | | | |
| Diatoms (Bacillariophyta) | VVA(1) | VVA(1) | VA(1) | VA(1) | A(1) | VA(1) | VVA(1) | VVA(1) | A(1) | VA(1) |
| Red Algae (Rhodophyta) | | | | | | | | | | |
| Audouinella | | R(10) | | | | | | | | |
| Blue-green Algae (Cyanophyta) | | | | | | | | | | |
| Calothrix | | | R(14) | | | | | | | |
| Chroococcus | | | | | R | R(15) | | | R | |
| Dactylococcopsis | C(10) | C(11) | VC(6) | VC(4) | C | VC(7) | C(11) | VC(5) | VC(8) | VC(8) |
| Dichothrix | | | | | VC(4) | C(4) | VC(3) | | C(3) | C(6) |
| Nostoc | | | | | A(2) | C(6) | | | | A(2) |
| Oscillatoria | C(5) | C(5) | R(9) | | C(7) | C(5) | [illegible] | R(7) | C(4) | |
| Phormidium | | | R(13) | | | | | | | |
| Rivularia | | | C(8) | VC(2) | | R(13) | R(11) | | | |
| Tolypothrix | | | | | | | | | VC(2) | |

Table 21. Relative abundance and estimated rank by volume (in parentheses) of diatoms and genera of soft-bodied algae in composite samples of periphyton from natural substrates, March 18-21, 1985. R=rare; C=common; VC=very common; A=abundant; VA = very abundant; VVA = very very abundant.

| | CFR at Turah | Blackfoot River near mouth | CFR Blw. Milltown Dam | CFR Above Missoula | CFR Above Missoula WWTP | CFR Below Missoula WWTP | CFR at Shuffields | Bitterroot River Near Mouth | CFR at Harper Bridge | CFR 0.5 Mi. Blw. Champion |
|---|---|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | | | |
| Ankistrodesmus | | | | | | | | | | R(9) |
| Cladophora | R(6) | | R(5) | | R(6) | | C(4) | R(5) | R(6) | R(6) |
| Closterium | | | | | R(7) | | | R(7) | | C(4) |
| Cosmarium | R(9) | | | | | | | | R | |
| Cylindrocapsa | | | | | | | | | | |
| Mougeotia | | | | | | | | | | |
| Oedogonium | | | | | | R(6) | | | R(10) | R(7) |
| Pediastrum | | R(9) | | | | | | | | |
| Scenedesmus | R(10) | R(10) | | | | | | | R(9) | |
| Sphaerocystis | | | | | | | | | | |
| Spirogyra | | R(7) | | | | | | | | |
| Staurastrum | | | | | | | | C(6) | R | R(8) |
| Stigeoclonium | R(8) | R(6) | R(6) | R(5) | C(5) | C(5) | R(7) | C(4) | R(8) | |
| Ulothrix | VC(3) | C(3) | VC(3) | A(3) | C(4) | A(3) | A(2) | A(2) | VC(3) | VC(3) |
| Zygnema | | | | | | | | | | |
| Golden-brown Algae (Chrysophyta) | | | | | | | | | | |
| Hydrurus | A(2) | A(2) | A(2) | VC(2) | C(3) | VC(4) | VC(3) | | C(4) | |
| Tribonema | | | | | | | | | R | |
| Diatoms (Bacillariophyta) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) |
| Red Algae (Rhodophyta) | | | | | | | | | | |
| Audouinella | R(5) | R(5) | C(4) | C(4) | VC(2) | R(7) | R(6) | | R(7) | |
| Blue-green Algae (Cyanophyta) | | | | | | | | | | |
| Calothrix | R(7) | | R(7) | R(8) | | | | | | |
| Dactylococcopsis | | C(8) | | | | | | C(9) | | |
| Dichothrix | | | | R(7) | | | | | | |
| Nostoc | | | | | | | | | | |
| Oscillatoria | C(4) | C(4) | | | | VA(2) | C(5) | VC(3) | A(2) | A(2) |
| Phormidium | | | | R(6) | R(9) | | | R(8) | VC(5) | C(5) |
| Rivularia | | | | | R(8) | | R(8) | | | |
| Tolypothrix | | | | | | | | | | |

Table 21. Continued

| | CFR 4 Mi. Blw. Champion | CFR at Huson | CFR at Lozeau | CFR near St. Regis | Flathead River Nr. Mouth | CFR at Plains | CFR Abv. T. Falls Reservoir | CFR Blw. T. Falls Dam | CFR Blw. Noxon Dam | CFR Blw. Cabinet Gorge Dam |
|---|---|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | | | |
| Ankistrodesmus | | | | | | | | | | |
| Cladophora | | C(4) | R(4) | R(6) | | R(5) | | R(4) | R(9) | |
| Closterium | R(6) | R(9) | | | | | R(8) | R(7) | R(12) | |
| Cosmarium | R(7) | | R(7) | | | R(7) | | | | |
| Cylindrocapsa | | | | | | | | | VC(4) | VC(3) |
| Mougeotia | | | | | R(6) | | R(4) | | R(10) | |
| Oedogonium | | R(7) | | | R(7) | R(6) | | R(5) | R(11) | R(5) |
| Pediastrum | R(8) | | R(6) | | | | R(9) | | R | |
| Scenedesmus | | | | | R(10) | | C(10) | | | |
| Sphaerocystis | R(9) | | | | | | | | | |
| Spirogyra | | | | | | | | | R(7) | |
| Staurastrum | | R(10) | | R(9) | | | | | R | |
| Stigeoclonium | | C(5) | | C(4) | R(8) | | | | | R(7) |
| Ulothrix | VC(2) | A(2) | C(3) | C(3) | C(4) | C(3) | R(5) | R(6) | R | VC(4) |
| Zygnema | | | | | | | | | C(5) | |
| Golden-brown Algae (Chrysophyta) | | | | | | | | | | |
| Hydrurus | C(4) | | | | | A(2) | | | | |
| Tribonema | | | | | | | | | | |
| Diatoms (Bacillariophyta) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | A(1) | VVA(1) | VVA(1) | VA(1) | VA(1) | A(2) |
| Red Algae (Rhodophyta) | | | | | | | | | | |
| Audouinella | R(5) | | R(5) | C(5) | | C(4) | C(3) | C(3) | | |
| Blue-green Algae (Cyanophyta) | | | | | | | | | | |
| Calotrhix | | | | | | | | | | |
| Dactylococcopsis | | | | R(10) | | R(8) | | | R | R(8) |
| Dichothrix | | | | | VC(2) | | C(2) | VC(2) | VC(3) | R(6) |
| Nostoc | | | | | VC(3) | | | | C(8) | |
| Oscillatoria | VC(3) | A(3) | VA(2) | VC(2) | C(5) | | R(6) | | A(2) | A(1) |
| Phormidium | | C(6) | | | R(9) | | | | | |
| Rivularia | R(10) | R(8) | | R(8) | | | R(7) | | | |
| Tolypothrix | | | | R(7) | | | | | C(6) | |

Table 21. Relative abundance and estimated rank by volume (in parentheses) of diatoms and genera of soft-bodied algae in composite samples of periphyton from natural substrates, July 29 to August 1, 1985. R=rare; C=common; VC=very common; A=abundant; VA = very abundant; VVA = very very abundant.

| | CFR at Turah | Blackfoot River near mouth | CFR Blw. Milltown Dam | CFR Above Missoula | CFR Above Missoula WWTP | CFR Below Missoula WWTP | CFR at Shuffields | Bitterroot River Near Mouth | CFR at Harper Bridge | CFR 0.5 Mi. Blw. Champion |
|---|---|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | | | |
| *Ankistrodesmus* | C(7) | | | C(7) | C(6) | R | R | | R | |
| *Bulbochaete* | | | | | | | | | | |
| *Cladophora* | VA(2) | | VA(2) | VA(2) | A(2) | C(5) | C(5) | VA(2) | C(5) | VC(2) |
| *Closterium* | R | R | C(5) | C(4) | R | | R | R | R | C(7) |
| *Cosmarium* | VC(4) | R | A(3) | A(3) | VC(3) | A(4) | A(2) | R | VC(6) | VC(4) |
| *Gongrosira* | | | | | | | | VC(4) | | |
| *Hormidium* | R | R | R | | | | | | | |
| *Mougeotia* | | R | | | | | | | | |
| *Oedogonium* | | | | | | C(6) | | | | |
| *Oocystis* | | | | | | | | | | |
| *Pediastrum* | | | | R | R | R | R | R | C(7) | R |
| *Planktosphaeria* | | | | | | | | R | C(8) | R |
| *Scenedesmus* | C(6) | R | C(6) | C(6) | C(5) | C(7) | C(8) | A(3) | VC(4) | C(6) |
| *Selenastrum* | | | | | | | | R | | |
| *Spirogyra* | | A(2) | | | | | VC(4) | | | |
| *Stigeoclonium* | | R | | | | VA(2) | A(3) | | A(2) | VC(5) |
| *Ulothrix* | | R | | | | | | | R | |
| *Westella* | R | | R | | | | | | | |
| *Zygnema* | | | | | | | | | | |
| Diatoms (Bacillariophyta) | VVA(1) | VA(1) | VVA(1) | VVA(1) | VA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) | VVA(1) |
| Red Algae (Rhodophyta) | | | | | | | | | | |
| *Audouinella* | | | | R | R | | | | | |
| Blue-greenAlgae (Cyanophyta) | | | | | | | | | | |
| *Coelosphaerium* | | | | | | | | | | |
| *Merismopedia* | | | | | | | | | | |
| *Nostoc* | A(3) | C(4) | R | | | | | | | |
| *Oscillatoria* | | C(5) | | | | A(3) | VC(6) | C(5) | VC(3) | A(3) |
| *Phormidium* | R | | | | | | | | | |
| *Rivularia* | VC(5) | VC(3) | C(4) | C(5) | VC(4) | | VC(7) | | | |
| *Romeria* | | | | | | | | | | |
| *Tolypothrix* | | | | | | | | | | |

Table 21. Continued

| | CFR 4 Mi. Blw. Champion | CFR at Huson | CFR at Lozeau | CFR near St. Regis | Flathead River Nr. Mouth | CFR at Plains | CFR Abv. T. Falls Reservoir | CFR Blw. T. Falls Dam | CFR Blw. Noxon Dam | CFR Blw. Cabinet Gorge Dam |
|---|---|---|---|---|---|---|---|---|---|---|
| Green Algae (Chlorophyta) | | | | | | | | | | |
| Ankistrodesmus | | | | C(6) | | | C(5) | C(3) | C(8) | VC(5) |
| Bulbochaete | | | | | C(5) | | | | | |
| Cladophora | VC(2) | VC(2) | C(3) | R | | VC(2) | | | R | |
| Closterium | | R | C(5) | C(5) | | | | | | R |
| Cosmarium | VC(4) | VC(3) | VC(4) | VC(4) | | C(6) | | R | | C(11) |
| Gongrosira | | | R | | | | | | | |
| Hormidium | | | | | | | | | | |
| Mougeotia | | | | | R | | | | C(7) | C(8) |
| Oedogonium | | | | | | | R | | R | C(4) |
| Oocystis | | | | | | | | | | R |
| Pediastrum | R | R | | | R | | | R | R | |
| Planktosphaeria | | | | R | | | | | R | |
| Scenedesmus | C(6) | C(5) | C(6) | VC(3) | C(6) | C(5) | VC(4) | VC(2) | C(9) | C(6) |
| Selenastrum | | R | | | | | | | | |
| Spirogyra | | | | | | C(3) | | | A(2) | VC(3) |
| Stigeoclonium | VC(3) | VC(4) | | | A(2) | | VC(3) | | R | A(2) |
| Ulothrix | | | | | | | | | | |
| Westella | | | | | | | | | | |
| Zygnema | | | | | | | | | VC(4) | |
| Diatoms (Bacillariophyta) | VVA(1) | VVA(1) | VVA(1) | VA(1) | VC(3) | VA(1) | A(1) | A(1) | A(1) | VA(1) |
| Red Algae (Rhodophyta) | | | | | | | | | | |
| Audouinella | | | | | | | | | | |
| Blue-greenAlgae (Cyanophyta) | | | | | | | | | | |
| Coelosphaerium | | | | | | | | | | R |
| Merismopedia | | | | | | | R | R | | |
| Nostoc | | | | | A(1) | | | | C(5) | C(7) |
| Oscillatoria | C(5) | | | | | | | | VC(3) | C(9) |
| Phormidium | | | | | | | | | | |
| Rivularia | | | A(2) | A(2) | VC(4) | VC(4) | A([illegible]) | | | C(10) |
| Romeria | | | | | | | | | VC(6) | |
| Tolypothrix | | | | | | | | | R | R |

Table 22. Chlorophyll and biomass data for non-quantitative periphyton samples collected from natural substrates (stream cobbles).

| SITE | DATE | CHLOROPHYLL a / PHEOPHYTIN a | AUTOTROPHIC INDEX | STABILITY INDEX |
|---|---|---|---|---|
| 01 TURAH | 3/5/84 | 1.62 | 180.3 | 2.71 |
| | 8/3/84 | 1.63 | 369.3 | 2.29 |
| | 11/2/84 | 1.55 | 835.4 | 2.55 |
| 02 BLACKFOOT | 3/5/84 | 1.52 | 656.4 | 3.54 |
| | 8/3/84 | 1.68 | 1535.5 | 2.48 |
| | 11/2/84 | 1.54 | 1144.9 | 2.73 |
| 04 BLW MILLTOWN | 3/5/84 | 1.57 | 357.5 | 3.78 |
| | 8/3/84 | 1.64 | 507.7 | 2.30 |
| | 11/2/84 | 1.54 | 1355.4 | 2.84 |
| 05 ABV. MISSOULA | 3/5/84 | 1.58 | 919.3 | 3.96 |
| | 8/3/84 | 1.50 | 610.5 | 2.59 |
| | 10/29/84 | 1.50 | 800.5 | 2.35 |
| 06 ABV. STP | 3/5/84 | 1.40 | 944.6 | 4.54 |
| | 7/31/84 | 1.52 | 589.8 | 2.38 |
| | 10/29/84 | 1.58 | 1712.8 | 2.63 |
| 08 BLW. STP | 3/5/84 | 1.36 | 388.0 | 3.44 |
| | 7/31/84 | 1.62 | 183.6 | 2.04 |
| | 10/29/84 | 1.51 | 257.9 | 2.16 |
| 09 SHUFFIELDS | 3/5/84 | 1.48 | 252.6 | 3.70 |
| | 7/31/84 | 1.50 | 562.4 | 2.80 |
| | 10/30/84 | 1.52 | 249.5 | 2.73 |
| 10 BITTERROOT | 3/5/84 | 1.56 | 360.8 | 2.66 |
| | 7/30/84 | 1.41 | 421.9 | 2.92 |
| | 10/30/84 | 1.42 | 480.8 | 2.63 |
| 11 HARPER | 3/6/84 | 1.38 | 360.4 | 4.35 |
| | 7/30/84 | 1.43 | 375.7 | 2.84 |
| | 10/30/84 | 1.49 | 597.8 | 2.95 |
| 13 MARCURE | 3/6/84 | 1.55 | 279.1 | 3.15 |
| | 7/31/84 | 1.52 | 522.1 | 2.94 |
| | 10/30/84 | 1.46 | 283.7 | 2.77 |
| 14 FRENCHTOWN | 7/31/84 | 1.45 | 426.3 | 3.10 |
| | 10/30/84 | 1.45 | 348.9 | 2.97 |
| 15 HUSON | 3/6/84 | 1.62 | 209.3 | 2.94 |
| | 7/31/84 | 1.41 | 286.4 | 2.95 |
| | 10/30/84 | 1.28 | 255.4 | 2.99 |

Table 22. (Continued)

| SITE | DATE | CHLOROPHYLL a / PHEOPHYTIN a | AUTOTROPHIC INDEX | STABILITY INDEX |
|---|---|---|---|---|
| 16 NINEMILE | 3/7/84 | 1.58 | 223.2 | 3.51 |
| 17 ALBERTON | 3/7/84 | 1.52 | 307.3 | 3.86 |
| 18 TARKIO | 3/7/84 | 1.62 | 155.0 | 3.84 |
| 19 LOZEAU | 3/7/84 | 1.45 | 321.8 | 3.87 |
| | 7/31/84 | 1.56 | 617.6 | 2.60 |
| | 10/30/84 | 1.55 | 497.3 | 3.01 |
| 20 SUPERIOR | 3/7/84 | 1.54 | 248.2 | 3.59 |
| 21 ST. REGIS | 3/8/84 | 1.51 | 326.1 | 3.57 |
| | 8/1/84 | 1.72 | 1691.9 | 2.92 |
| | 10/31/84 | 1.57 | 1478.7 | 3.04 |
| 22 ABOVE FLATHEAD | 3/8/84 | 1.62 | 265.9 | 3.36 |
| 23 FLATHEAD | 8/1/84 | 1.58 | 1651.0 | 3.13 |
| | 10/31/84 | 1.60 | 1445.6 | 2.80 |
| 24 PLAINS | 3/8/84 | 1.53 | 843.0 | 4.62 |
| | 8/1/84 | 1.46 | 1174.8 | 2.85 |
| | 10/31/84 | 1.56 | 1539.9 | 2.96 |
| 25 ABV.THOMPSON FALLS | 3/8/84 | 1.41 | 1242.2 | 4.87 |
| | 8/1/84 | 1.46 | 1037.6 | 2.55 |
| | 10/31/84 | 1.47 | 756.6 | 2.93 |
| 27 BLW.THOMPSON FALLS | 3/9/84 | 1.48 | 1977.5 | 6.70 |
| | 8/2/84 | 1.62 | 1373.6 | 2.88 |
| | 11/1/84 | 1.44 | 875.8 | 3.86 |
| 29 BELOW NOXON | 3/9/84 | 1.56 | 509.9 | 3.94 |
| | 8/2/84 | 1.59 | 620.6 | 2.69 |
| | 11/1/84 | 1.54 | 2857.3 | 2.95 |
| 31 BLW. CABINET GORGE | 11/1/84 | 1.62 | 580.5 | 2.79 |

Table 23. Chlorophyll and biomass data for periphyton collected on artificial substrates (glass slides) during October, 1983.

| | SITE | DATE (days exposed) | | CHLORO. a (mg/m²) | CHLORO. a ACCRUAL (mg/m²/day) | CHLORO. a / PHEO. a | BIOMASS (mg/m²) | BIOMASS ACCRUAL (mg/m²/day) | AUTOTROPH. INDEX | STABILITY INDEX |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | HARPER | 10/5-10/27/83 (22 days) | mean | 73.47 | 3.34 | 1.73 | 4806.8 | 218.5 | 66.2 | 2.34 |
| | | | (rep. 1) | (68.53) | (3.12) | (1.71) | (5085.7) | (231.2) | (74.2) | (—) |
| | | | 2) | (68.03) | (3.09) | (1.82) | (3824.8) | (173.8) | (56.2) | (—) |
| | | | 3) | (108.37) | (4.93) | (1.71) | (6681.9) | (303.7) | (61.7) | (—) |
| | | | 4) | (67.22) | (3.06) | (1.71) | (4373.3) | (198.8) | (65.0) | (2.34) |
| | | | 5) | (55.22) | (2.51) | (1.68) | (4068.6) | (184.9) | (73.7) | (2.33) |
| 15 | HUSON | 10/5-10/27/83 (22 days) | mean | 95.00 | 4.32 | 1.73 | 5089.5 | 231.3 | 54.5 | 2.35 |
| | | | (rep. 1) | (97.29) | (4.42) | (1.77) | (5161.9) | (234.6) | (53.0) | (—) |
| | | | 2) | (88.92) | (4.04) | (1.77) | (4076.2) | (185.3) | (45.8) | (—) |
| | | | 3) | (101.23) | (4.60) | (1.74) | (5280.0) | (240.0) | (52.2) | (—) |
| | | | 4) | (112.38) | (5.12) | (1.65) | (5398.1) | (245.4) | (48.0) | (2.35) |
| | | | 5) | (75.20) | (3.42) | (1.72) | (5531.4) | (251.4) | (73.6) | (2.34) |

Table 23. Chlorophyll and biomass data for periphyton collected on artificial substrates (glass slides) during July and August, 1984.

| | SITE | DATE (days exposed) | | CHLORO. a (mg/m2) | CHLORO. a ACCRUAL (mg/m2/day) | CHLORO. a / PHEO. a | BIOMASS (mg/m2) | BIOMASS ACCRUAL (mg/m2/day) | AUTOTROPH. INDEX | STABILITY INDEX |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | TURAH | 7/26–8/10/84 (15.2 days) | mean | 4.153 | .273 | 1.64 | 1112.3 | 73.1 | 270.3 | 2.20 |
| | | | (rep. 1) | (4.756) | (.312) | (1.60) | (1097.1) | (72.1) | (230.6) | (2.23) |
| | | | 2) | (4.412) | (.290) | (1.61) | (1093.3) | (71.9) | (247.7) | [illegible] |
| | | | 3) | (3.953) | (.260) | (1.65) | [illegible] | (75.1) | (289.0) | [illegible] |
| | | | 4) | (4.030) | (.265) | (1.65) | [illegible] | (73.6) | (277.8) | (2.17) |
| | | | 5) | (3.614) | (.237) | (1.69) | [illegible] | (72.9) | (306.6) | (2.16) |
| 06 | ABV. STP | 7/26–8/9/84 (14.2 days) | mean | 2.209 | .155 | 1.59 | 873.1 | 61.5 | 395.1 | 2.23 |
| | | | (rep. 1) | (2.214) | (.155) | (1.58) | (880.0) | (61.9) | (397.3) | (2.26) |
| | | | 2) | (2.128) | (.149) | (1.59) | (792.3) | (55.8) | (372.2) | (2.26) |
| | | | 3) | (2.216) | (.156) | (1.59) | (1055.2) | (74.3) | (476.1) | (2.18) |
| | | | 4) | (2.216) | (.156) | (1.60) | (792.3) | (55.8) | (357.5) | (2.20) |
| | | | 5) | (2.270) | (.159) | (1.58) | (845.7) | (59.5) | (372.4) | (2.27) |
| 08 | BLW. STP | 7/25–8/9/84 (14.8 days) | mean | 11.328 | .765 | 1.58 | 1948.1 | 131.0 | 212.7 | 2.07 |
| | | | (rep. 1) | (12.489) | (.844) | (1.52) | (2354.2) | (156.1) | (188.4) | (2.12) |
| | | | 2) | (27.830) | (1.880) | (1.56) | (3413.3) | (230.6) | (122.6) | (2.04) |
| | | | 3) | (8.777) | (.593) | (1.59) | (1980.9) | (133.8) | (225.6) | (2.00) |
| | | | 4) | (4.425) | (.299) | (1.58) | (1180.9) | (79.8) | (266.8) | (2.09) |
| | | | 5) | (3.119) | (.211) | (1.63) | (811.4) | (54.8) | (260.0) | (2.12) |
| 09 | SHUFFIELDS | 7/25–8/9/84 (14.8 days) | mean | 9.969 | .673 | 1.53 | 1833.8 | 123.8 | 185.2 | 2.06 |
| | | | (rep. 1) | (5.277) | (.356) | (1.44) | (921.9) | (62.2) | (174.6) | (2.11) |
| | | | 2) | (7.885) | (.532) | (1.51) | (1462.8) | (98.8) | (185.5) | (2.05) |
| | | | 3) | (7.987) | (.539) | (1.52) | (1676.1) | (113.2) | (209.8) | (2.03) |
| | | | 4) | (10.905) | (.736) | (1.57) | (1950.4) | (131.7) | (178.8) | (2.12) |
| | | | 5) | (17.793) | (1.202) | (1.61) | (3158.0) | (213.3) | (177.4) | (1.99) |
| 11 | HARPER | 7/25–8/10/84 (14.2 days) | mean | 12.466 | .878 | 1.57 | 1849.1 | 130.2 | 150.6 | 2.23 |
| | | | (rep. 1) | (9.826) | (.692) | (1.59) | (1862.8) | (131.2) | (189.5) | (2.27) |
| | | | 2) | (12.058) | (.849) | (1.68) | (1733.3) | (122.1) | (143.7) | (2.20) |
| | | | 3) | (13.513) | (.952) | (1.58) | (1817.1) | (128.0) | (134.4) | (2.22) |
| | | | 4) | (14.137) | (.996) | (1.56) | (1893.3) | (133.3) | (133.9) | (2.25) |
| | | | 5) | (12.795) | (.901) | (1.54) | (1939.0) | (136.5) | (151.5) | (2.20) |
| 13 | MARCURE | 7/25/–8/10/84 (15.8 days) | mean | 18.363 | 1.162 | 1.68 | 2246.0 | 142.1 | 127.4 | 2.11 |
| | | | (rep. 1) | (16.564) | (1.048) | (1.64) | (2140.9) | (135.5) | (129.2) | (2.18 |
| | | | 2) | (12.831) | (.812) | (1.71) | (1798.0) | (113.8) | (140.1) | (2.05 |
| | | | 3) | (31.778) | (2.011) | (1.70) | (3211.4) | (203.2) | (101.0) | (2.10 |
| | | | 4) | (14.987) | (.948) | (1.69) | (2121.9) | (134.2) | (141.5) | (2.14 |
| | | | 5) | (15.654) | (.990) | (1.68) | (1958.0) | (123.9) | (125.0) | (2.07 |

Table 23. (Continued)

| | SITE | DATE (days exposed) | | CHLORO. a (mg/m$^2$) | CHLORO. a ACCRUAL (mg/m$^2$/day) | CHLORO. a / PHEO. a | BIOMASS (mg/m$^2$) | BIOMASS ACCRUAL (mg/m$^2$/day) | AUTOTROPH. INDEX | STABILITY INDEX |
|---|---|---|---|---|---|---|---|---|---|---|
| 15 | HUSON | 7/25-8/10/84 (16.0 days) | mean | 11.312 | .707 | 1.64 | 2012.9 | 101.7 | 178.7 | 2.27 |
| | | | (rep. 1) | (11.149) | (.696) | (1.63) | (1927.6) | (120.4) | (172.8) | (2.22) |
| | | | 2) | (11.001) | (.687) | (1.64) | (1847.6) | (115.4) | (167.9) | (2.26) |
| | | | 3) | (9.208) | (.575) | (1.63) | (1870.4) | (116.9) | (203.1) | (2.30) |
| | | | 4) | (12.273) | (.767) | (1.65) | (1923.8) | (120.2) | (156.7) | (2.26) |
| | | | 5) | (12.929) | (.808) | (1.66) | (2495.2) | (155.9) | (192.9) | (2.31) |
| 20 | SUPERIOR | 7/25-8/9/84 (14.8 days) | mean | 7.369 | .498 | 1.57 | 1628.1 | 110.0 | 224.8 | 2.17 |
| | | | (rep. 1) | (10.449) | (.706) | (1.53) | (2076.1) | (140.2) | (198.6) | (2.13) |
| | | | 2) | (6.052) | (.408) | (1.51) | (1424.7) | (96.2) | (235.3) | (2.18) |
| | | | 3) | (7.214) | (.487) | (1.63) | (1340.9) | (90.7) | (185.8) | (2.26) |
| | | | 4) | (6.350) | (.429) | (1.58) | (1775.2) | (119.9) | (279.5) | (2.16) |
| | | | 5) | (6.782) | (.458) | (1.59) | (1523.8) | (102.9) | (224.6) | (2.14) |
| 24 | PLAINS | 7/24-8/9/84 (15.5 days) | mean | 5.930 | .382 | 1.61 | 3385.1 | 218.4 | 718.7 | 2.31 |
| | | | (rep. 1) | (12.254) | (.790) | (1.59) | (3352.3) | (216.2) | (273.5) | (2.26) |
| | | | 2) | (4.810) | (.310) | (1.66) | (3440.0) | (221.9) | (715.0) | (2.36) |
| | | | 3) | (2.903) | (.187) | (1.60) | (3649.5) | (235.4) | (1256.9) | (2.33) |
| | | | 4) | (4.702) | (.303) | (1.60) | (3329.5) | (214.8) | (707.9) | (2.27) |
| | | | 5) | (4.928) | (.317) | (1.62) | (3154.2) | (203.5) | (640.0) | (2.32) |

## 2. Deep-water Monitoring: Reservoir and River Pools

### a. Rationale

As in all flowing water environments, the kinds and diversity of organisms living on or in the bottom material of the mainstem impoundements and deep river pools can provide much information about the relative health of the environment. Analysis of benthic organisms will allow assessment of environmental conditions in the bottom sediments, including the biological effects of any heavy metals and organic deposits and the presence or absence of dissolved oxygen.

### b. Methods

The four mainstem impoundments and up to 11 river pools were sampled for biology during each seasonal monitoring run. Samples of benthic macroinvertebrates were brought up with a Petite Ponar Grab.

Sample collection and analysis methods and the analyzing laboratory are summarized in Table 24.

### c. Results

Species identifications, counts, percentage distribution, and Shannon's species diversity values for each Petite Ponar Grab macroinvertebrate sample are given in Tables 16 and 17.

Table 24. Sample Collection and Analysis Methods for Deep-water and Open-water Biological Monitoring

| Variable | Collection Method | Analytical Method | Laboratory |
|---|---|---|---|
| Benthic Macroinvertebrate Community Structure | Petite Ponar grab sample | Species identifications and counts made using numerous current taxonomic references. | C. Evan Hornig (contractor) |
| Phytoplankton Community Structure | Plankton tow sample described in Appendix B. | Species identifications and counts made using numerous current taxonomic references. | MDHES WQB |
| Phytoplankton Chlorophyll (mg/l) | Grab sample | Analysis technique described in Appendix B. | MDHES Chem Lab and WQB |
| Secchi Disc transparency (ft.) | ——— | On-site field measurement | Field personnel |

3. Open-water monitoring

a. Rationale

Analysis of reservoir phytoplankton (suspended algae) species composition and abundance, yields much the same kind of information regarding environmental conditions in the reservoirs and its overall health as does the benthic macroinvertebrate samples. Analysis of phytoplankton chlorophyll concentrations in samples of reservoir water can be compared to ambient nutrient concentrations in order to assess eutrophication potential in the impoundments, according to criteria published by the Environmental Protection Agency.

b. Methods

Phytoplankton was collected seasonally from each of the reservoirs for taxonomic analysis, determination of concentration and chlorophyll content. Secchi disc transparency was also measured as an indication of depth of light penetration.

Sample collection methods and the analyzing laboratory are summarized in Table 24.

c. Results

Reservoir phytoplankton identifications, concentrations and chlorophyll measurements are presented in Tables 25 and 26. Secchi disc transparencies, corresponding weather and sky conditions and time of day are listed in Table 27.

Table 25. Density of viable algae cells in surface-water phytoplankton grab samples collected April 4-5, 1984.

| Taxa | Number of Cells per Milliliter | | | | |
|---|---|---|---|---|---|
| | Milltown Reservoir | Above T. Falls Reservoir | Thompson Falls Reservoir | Noxon Rapids Reservoir | Cabinet Gorge Reservoir |
| Green Algae (Chlorophyta) | | | | | |
| <u>Ankistrodesmus</u> | | 29 | | 7 | 22 |
| <u>Oocystis</u> | | 29 | | | |
| <u>Scenedesmus</u> | | | 29 | | |
| Euglenoid Algae (Euglenophyta) | | | | | |
| <u>Euglena</u> | 36 | 7 | | | |
| Golden-brown Algae (Chrysophyta) | | | | | |
| <u>Dinobryon</u> | | 15 | 138 | 36 | 72 |
| <u>Hydrurus</u> <u>foetidus</u> | 398 | | | | |
| <u>H.</u> <u>foetidus</u> statospores | 36 | | | | |
| Diatoms (Bacillariophyta) | | | | | |
| <u>Achnanthes</u> | 72 | 80 | 29 | | |
| <u>Asterionella</u> | | 36 | 7 | 7 | |
| <u>Cocconeis</u> | 22 | | 29 | | 7 |
| <u>Cyclotella</u> | 36 | 72 | 80 | | |
| <u>Cymbella</u> | 239 | 174 | 145 | 22 | 7 |
| <u>Diatoma</u> | 15 | 123 | 123 | 65 | 7 |
| <u>Epithemia</u> | | | 7 | | |
| <u>Eunotia</u> | | 7 | | | |
| <u>Fragilaria</u> | | 7 | | | |
| <u>Gomphoneis</u> | 7 | 7 | | | |
| <u>Gomphonema</u> | 413 | 94 | | 15 | 15 |
| <u>Hannaea</u> | | | 7 | | |
| <u>Melosira</u> | | 58 | | | 7 |
| <u>Navicula</u> | 145 | 181 | 116 | | 29 |
| <u>Nitzschia</u> | 181 | 377 | 275 | 51 | 43 |
| <u>Rhizosolenia</u> | | 15 | 15 | 7 | 36 |
| <u>Stephanodiscus</u> | | | | 15 | 36 |
| <u>Surirella</u> | 94 | 7 | | | |
| <u>Synedra</u> | 72 | 239 | 239 | 138 | 87 |
| <u>Tabellaria</u> | | | | | 116 |
| unidentified centric diatoms | | 87 | 225 | 2,145 | 1,826 |
| unidentified pennate diatoms | 43 | 72 | 72 | 36 | 29 |
| Blue-green Algae (Cyanophyta) | | | | | |
| <u>Oscillatoria</u> | 72 | 435 | 51 | 326 | |
| Microplankton | | 304 | 217 | 333 | 435 |
| TOTAL VIABLE ALGAE | 1,881 | 2,455 | 1,804 | 3,203 | 2,774 |
| <u>Dead Algae</u> | 674 | 732 | 761 | 297 | 420 |

Table 25. (Continued) Density of viable algae cells in surface-water phytoplankton grab samples grab samples collected July 24-26, 1984.

| Taxa | Number of Cells per Milliliter | | | |
|---|---|---|---|---|
| | Milltown Reservoir | Thompson Falls Reservoir | Noxon Rapids Reservoir | Cabinet Gorge Reservoir |
| Green Algae (Chlorophyta) | | | | |
| Ankistrodesmus | | 7 | 15 | |
| Botryococcus | 7 | | | |
| Gloecystis | | | 30 | |
| Gonium | | | 150 | |
| Pediastrum | 232 | | | |
| Scenedesmus | 45 | 30 | 60 | 30 |
| Golden-brown Algae (Chrysophyta) | | | | |
| Dinobryon | | | | 7 |
| Diatoms (Bacillariophyta) | | | | |
| Achnanthes | 68 | 30 | | |
| Asterionella | | | | 45 |
| Cocconeis | 7 | | | |
| Cymbella | | 22 | | |
| Diatoma | 38 | 15 | | |
| Epithemia | 15 | | | |
| Fragilaria | | 15 | | 22 |
| Gomphonema | 7 | 7 | | |
| Melosira | | | | 128 |
| Meridion | 7 | | | |
| Nitzschia | 120 | 360 | 45 | 52 |
| Rhizosolenia | | | 7 | |
| Rhoicosphenia | 7 | | | |
| Synedra | 68 | 60 | | |
| unidentified centric diatoms | 45 | 180 | 232 | 248 |
| unidentified pennate diatoms | | 52 | 38 | 22 |
| Blue-green Algae (Cyanophyta) | | | | |
| Dactylococopsis | | 330 | | |
| Miscellaneous Flagellated Algae | | | | |
| Cryptomonas | 7 | 22 | 7 | |
| Peridinium | | | | 7 |
| Microplankton | 68 | 315 | 202 | 90 |
| TOTAL VIABLE ALGAE | 741 | 1,445 | 786 | 651 |
| Dead Algae | 525 | 360 | 173 | 187 |

Table 25. (Continued) Density of viable algae cells in surface-water phytoplankton grab samples collected October 25-26, 1984.

| Taxa | Milltown Reservoir | Thompson Falls Reservoir | Noxon Reservoir at Trout Cr. | Noxon Reservoir at Martin Cr. | Cabinet Gorge Reservoir |
|---|---|---|---|---|---|
| | Number of Cells per Milliliter | | | | |
| Green Algae (Chlorophyta) | | | | | |
| Ankistrodesmus | 7 | 22 | 7 | 7 | |
| Chlamydomonas | 7 | 7 | | | |
| Cosmarium | | 7 | | | |
| Mougeotia | | 60 | | | |
| Scenedesmus | 30 | 22 | | | |
| Golden-brown Algae (Chrysophyta) | | | | | |
| Dinobryon | | 7 | 15 | | |
| Diatoms (Bacillariophyta) | | | | | |
| Achnanthes | 22 | | | | 7 |
| Amphora | 15 | | 7 | | |
| Asterionella | | | | 75 | |
| Cocconeis | | | 15 | | |
| Cymbella | 7 | 7 | | | |
| Diatoma | 52 | 15 | | | |
| Epithemia | 22 | | | | |
| Fragiliaria | 75 | | 38 | 22 | 22 |
| Navicula | 22 | 15 | 7 | | 7 |
| Nitzschia | 45 | 7 | 7 | 7 | |
| Rhizosolenia | 7 | | | | |
| Rhoicosphenia | 7 | | | | |
| Stephanodiscus | | | | | 7 |
| Synedra | 22 | | 7 | | |
| unidentified centric diatoms | 15 | 22 | 38 | 83 | 22 |
| unidentified pennate diatoms | 60 | 15 | 15 | | 22 |
| Blue-green Algae (Cyanophyta) | | | | | |
| Chroococcus | | 15 | | | |
| Oscillatoria | 60 | | | | |
| Miscellaneous Flagellated Algae | | | | | |
| Cryptomonas | | 7 | | | |
| Microplankton | 225 | 240 | 210 | 218 | 195 |
| TOTAL VIABLE ALGAE | 700 | 468 | 366 | 412 | 282 |
| Dead Algae | 405 | 112 | 112 | 22 | 97 |

Table 25. (Continued) Density of viable algae cells in surface-water phytoplankton grab samples collected March 25-26, 1985. Samples were euphotic zone composites of subsamples taken at the surface, Secchi Disc depth, and mid-depth.

| Taxa | Number of Cells per Milliliter | | | | |
|---|---|---|---|---|---|
| | Milltown Reservoir | Thompson Falls Reservoir | Noxon Reservoir nr. Trout Cr. | Noxon Reservoir nr. N. Shore | Cabinet Gorge Reservoir |
| Green Algae (Chlorophyta) | | | | | |
| <u>Ankistrodesmus</u> | 7 | 15 | 7 | 7 | |
| <u>Dictyosphaerium</u> | | | | | [illegible] |
| <u>Scenedesmus</u> | | | | | |
| Golden-brown Algae (Chrysophyta) | | | | | |
| <u>Dinobryon</u> | | 22 | | 52 | |
| Red Algae (Rhodophyta) | | | | | |
| <u>Andouinella</u> | 45 | | | | |
| Diatoms (Bacillariophyta) | | | | | |
| <u>Achnanthes</u> | 60 | | 15 | 22 | 7 |
| <u>Asterionella</u> | | | | | 30 |
| <u>Cocconeis</u> | 75 | | 7 | 22 | 7 |
| <u>Cymbella</u> | 218 | 180 | 128 | 38 | 38 |
| <u>Diatoma</u> | 38 | 30 | 15 | 15 | 30 |
| <u>Epithemia</u> | 60 | 7 | | | |
| <u>Fragilaria</u> | 112 | 15 | 30 | 7 | 142 |
| <u>Gomphoneis</u> | | 7 | 15 | | |
| <u>Gomphonema</u> | 398 | 22 | 22 | 15 | |
| <u>Hannaea</u> | 22 | 7 | | | |
| <u>Hantzschia</u> | | 7 | | | |
| <u>Melosira</u> | 15 | | | | |
| <u>Meridion</u> | 38 | | | | |
| <u>Navicula</u> | 135 | 105 | 52 | 52 | |
| <u>Nitzschia</u> | 308 | 83 | 68 | 75 | 30 |
| <u>Rhizosolenia</u> | | | 22 | 22 | 30 |
| <u>Rhoicosphenia</u> | 52 | 7 | 7 | | |
| <u>Surirella</u> | 7 | | 7 | | |
| <u>Synedra</u> | 7 | 83 | 150 | 202 | 68 |
| unidentified centric diatoms | 30 | 52 | 83 | 52 | 38 |
| unidentified pennate diatoms | 45 | 150 | 120 | 97 | 7 |
| Miscellaneous Flagellated Algae | | | | | |
| <u>Cryptomonas</u> | | | | | 7 |
| Microplankton | 810 | 322 | 270 | 232 | 398 |
| TOTAL VIABLE ALGAE | 2,482 | 1,114 | 1,018 | 910 | 2,062 |
| Dead Algae | 1,748 | 832 | 803 | 772 | 450 |

Table 25. (Continued) Density of viable algae cells in surface-water phytoplankton grab samples collected July 29-30, 1985. Samples were euphotic zone composites of subsamples taken at the surface and the Secchi Disc depth.

| Taxa | Number of Cells per Milliliter | | | | |
|---|---|---|---|---|---|
| | Milltown Reservoir | Thompson Falls Reservoir | Noxon Reservoir at Trout Cr. | Noxon Reservoir nr. N. Shore | Cabinet Gorge Reservoir |
| Green Algae (Chlorophyta) | | | | | |
| Actinastrum | | 128 | 97 | 15 | 173 |
| Ankistrodesmus | 52 | 142 | 97 | 52 | 38 |
| Cosmarium | 52 | 7 | | | |
| Oocystis | | | | 60 | 30 |
| Pediastrum | | | | 30 | |
| Scenedesmus | 52 | 60 | | 30 | |
| Westella | | | | | 120 |
| unidentified unicell | | | 45 | 15 | |
| Euglenoid Algae (Englenophyta) | | | | | |
| Euglena | 22 | | | | |
| Golden-brown Algae (Chrysophyta) | | | | | |
| Dinobryon | | 15 | 7 | 105 | |
| Diatoms (Bacillariophyta) | | | | | |
| Achnanthes | 22 | | 7 | | |
| Cocconeis | | | | | 7 |
| Cymbella | 22 | 7 | | | |
| Epithemia | 15 | | | | |
| Gomphonema | 30 | 7 | | | |
| Melosira | | | 158 | | |
| Navicula | 30 | 30 | | | |
| Nitzschia | 60 | 270 | 45 | 7 | 7 |
| Synedra | 22 | 30 | 7 | | |
| unidentified centric diatoms | 38 | 3,615 | 263 | 45 | 292 |
| unidentified pennate diatoms | 7 | | | | |
| Blue-green Algae (Cyanophyta) | | | | | |
| Anabaena | | 30 | 22 | | |
| Oscillatoria | 7 | | | | |
| Miscellaneous Flagellated Algae | | | | | |
| Cryptomonas | | | | 7 | |
| Peridinium | 15 | | 7 | | |
| Rhodomonas | | | 7 | | |
| unidentified unicell | 38 | 105 | 533 | 142 | |
| Microplankton | 202 | 457 | 390 | 315 | 142 |
| TOTAL VIABLE ALGAE | 686 | 4,903 | 1,685 | 823 | 809 |
| Dead Algae | 855 | 457 | 98 | 187 | 173 |

Table 26. Reservoir phytoplankton chlorophyll results

| | Site | Date | Chlorophyll *a* ($mg/m^3$) | Chloro. *a* / Pheo. *a* | Stability Index |
|---|---|---|---|---|---|
| 03 | Milltown Reservoir | 04/04/84 | 2.96 | 1.29 | 3.41 |
| | | 07/26/84 | 1.16 | [illegible] | 2.73 |
| | | 10/25/84 | 3.15 | 1.22 | 2.45 |
| | | 03/25/85 | 5.55 | [illegible] | 2.17 |
| | | (duplicate) | 5.13 | 1.45 | 2.16 |
| | | 07/29/85 | 2.30 | 1.30 | 2.03 |
| | | (duplicate) | 2.45 | 1.38 | 2.08 |
| 26 | Thompson Falls Reservoir | 04/05/84 | 3.57 | 1.60 | 2.77 |
| | | 07/25/84 | — sample lost in laboratory — | | |
| | | 10/25/84 | 3.15 | [illegible] | 2.45 |
| | | 03/25/85 | 5.41 | 1.60 | 2.31 |
| | | (duplicate) | 5.43 | 1.52 | 2.42 |
| | | 07/29/85 | 2.93 | 1.53 | 2.08 |
| 28 | Noxon Reservoir near north shore | 04/05/84 | 3.06 | 1.56 | 2.47 |
| | | 07/25/84 | 0.53 | 1.81 | 2.90 |
| | | 10/25/84 | 1.67 | 1.49 | 2.48 |
| | | 03/26/85 | 3.97 | 1.43 | 2.30 |
| | | (duplicate) | 4.08 | 1.35 | 2.41 |
| | | 07/30/85 | 1.66 | 1.42 | 2.63 |
| 28 | Noxon Reservoir near Trout Creek | Spring '84 | — not sampled — | | |
| | | Summer '84 | — not sampled — | | |
| | | 10/25/84 | 1.24 | 1.37 | 2.52 |
| | | 03/26/85 | 3.56 | 1.40 | 2.48 |
| | | (duplicate) | 3.62 | 1.43 | 2.40 |
| | | 07/30/85 | 3.85 | 1.48 | 2.21 |
| 30 | Cabinet Gorge Reservoir | 04/05/84 | 2.96 | 1.31 | 2.68 |
| | | 07/25/84 | — sample lost in laboratory — | | |
| | | 10/26/84 | 1.74 | 1.43 | 2.43 |
| | | 03/26/85 | 2.52 | 1.42 | 2.63 |
| | | (duplicate) | 2.53 | 1.30 | 2.90 |
| | | 07/30/85 | 1.17 | 1.40 | 2.74 |

Table 27. Reservoir Secchi Disc Transparency Data

| Date | Time | Station* | Secchi Disc Reading (ft) | Weather and Sky Conditions |
|---|---|---|---|---|
| 4/4/84 | 11:20 a.m. | 03 Milltown Reservoir | 7.5 | Bright, Sunny |
| 4/5/84 | 10:45 a.m. | 26 Thompson Falls Reservoir | 11.5 | Bright, Sunny |
| 4/5/84 | 4:30 p.m. | 28 Noxon Rapids Reservoir | 11.0 | Cloudy |
| 4/5/84 | 2:15 p.m. | 30 Cabinet Gorge Reservoir | 12.0 | Overcast, Raining |
| 7/26/84 | 11:00 a.m. | 03 Milltown Reservoir | --- | Bright, Sunny. |
| 7/25/84 | 10:00 a.m. | 26 Thompson Falls Reservoir | 11.0 | Bright, Sunny |
| 7/25/84 | 1:00 p.m. | 28 Noxon Rapids Reservoir | 13.0 | Bright, Sunny |
| 7/25/84 | 5:00 p.m. | 30 Cabinet Gorge Reservoir | 13.0 | Bright, Sunny |
| 10/25 to 10/26/84 | | No data recorded | | |
| 3/25/85 | 12:00 p.m. | 03 Milltown Reservoir | 3.5, 4.5 | Bright, Sunny |
| 3/25/85 | 5:00 p.m. | 26 Thompson Falls Reservoir | 7.0 | Cloudy, Snowing |
| 3/26/85 | 2:00 p.m. | 28 Noxon Rapids Reservoir | | |
| | | Near Trout Creek | 4.5 | Partly Cloudy, Windy |
| | | N. Shore Campground | 4.5 | Bright, Sunny, Windy |
| 3/26/85 | 11:00 a.m. | 30 Cabinet Gorge Reservoir | 6.0 | Bright, Sunny, Windy |
| 7/29/85 | 12:00 p.m. | 03 Milltown Reservoir | 6.5 | Bright, Sunny |
| 7/29/85 | 5:30 p.m. | 26 Thompson Falls Reservoir | 7.0 | Bright, Sunny |
| 7/30/85 | 12:00 p.m. | 28 Noxon Rapids Reservoir | | |
| | | Near Trout Creek | 10.0 | Partly Cloudy |
| | | N. Shore Campground | 12.0 | Partly Cloudy |
| 7/30/85 | 9:30 a.m. | 30 Cabinet Gorge Reservoir | 15.5 | Bright, Sunny |

*Actual reservoir measurement location given in Table 1.B. and Appendix C.

## IV. MPDES Self-Monitoring Data

All municipal and industrial discharges to state waters must be authorized by the Montana Pollutant Discharge Elimination System (MPDES) permit program administered by the Water Quality Bureau. The permit specifies allowable levels of contaminants in the wastewater discharge and requires monitoring of the levels of those contaminants by the permittee (self-monitoring). In addition, the Water Quality Bureau performs its own compliance monitoring of permitted discharges to ensure compliance with the permit requirements.

The City of Missoula municipal wastewater treatment plant and the Champion Frenchtown Mill are the two primary wastewater dischargers to the reach of the Clark Fork under study. Self monitoring is performed on a daily or more frequent basis by both facilities for certain parameters and less frequently for other tests. Since these self-monitoring records will be an important part of the information which will be evaluated in the EIS, summaries of the data are tabulated in the following tables. Also included are yearly summaries for Champion's wastewater disposal system for state fiscal years 1984 and 1985.

Table 28. City of Missoula Wastewater Treatment Plant Discharge Self-Monitoring Data

Monthly Averages

| Month | Flow (cfs) | $BOD_5$ (mg/l) | TSS (mg/l) | Total Ammonia-N (mg/l) | Total KJLD-N (mg/l) | Nitrate+ Nitrite-N (mg/l) | Total Phosphorus-P (mg/l) |
|---|---|---|---|---|---|---|---|
| January 1984 | 8.77 | 23.6 | 28.7 | — | — | — | — |
| February 1984 | 8.35 | 40.4 | 36.9 | — | — | — | — |
| March 1984 | 8.48 | 32 | 30 | — | — | — | — |
| April 1984 | 8.77 | 45.0 | 62.0 | 12.76 | 14.14* | 2.73* | 6.12* |
| May 1984 | 9.49 | 45 | 42 | 11.1 | 13.9* | 1.80 | 6.98* |
| June 1984 | 9.53 | 27 | 29 | 10.62* | 12.13* | 1.88* | 5.14* |
| July 1984 | 9.27 | 28.7 | 29 | 6.21* | 7.69* | 2.35* | 7.58* |
| August 1984 | 9.02 | 22 | 16.4 | 5.35 | 7.16 | 3.70 | 8.26* |
| September 1984 | 8.51 | 23 | 17.8 | 5.57 | 5.14 | 2.15 | 6.21* |
| October 1984 | 8.68 | 33.3 | 24.8 | 6.8 | 8.0* | 2.4* | 3.2* |
| November 1984 | 8.84 | 30.2 | 23 | 7.08 | 8.7 | 3.27 | 3.66* |
| December 1984 | 8.49 | 26 | 29 | 6.49 | 10.3* | 4.3 | — |
| January 1985 | 8.39 | 30.1 | 28 | 8.19 | 8.32 | 2.73 | 6.48* |
| February 1985 | 8.73 | 26.9 | 18.6 | 10.66 | 12.3 | 1.8 | 4.5* |
| March 1985 | 8.39 | 22.5 | 13.9 | 11.2 | 12.1 | 3.7 | 5.17* |
| April 1985 | 8.76 | 36 | 20.8 | 8.8 | 8.8 | 4.9 | 5.2* |
| May 1985 | 9.77 | 63 | 38 | 3.7 | 5.0 | 4.8 | 2.2* |
| June 1985 | 9.77 | 31.5 | 15 | 1.47 | 2.8 | 3.8 | — |
| July 1985 | 9.61 | 26.5 | 12.5 | 1.88 | 2.61 | 1.68 | 4.49* |

* = only one value reported

Table 29. Champion International Frenchtown Mill Self-Monitoring Data.

Part 1. Treated Wastewater Direct Discharge 001.

| Month | No. of Days of Discharge | Monthly Averages * BOD (mg/l) | TSS (mg/l) | Flow (cfs) | Color (SCU) | $H_2S$ (mg/l) | Nitrate-N (mg/l) | Nitrite-N (mg/l) | Total KJLD-N (mg/l) | Total Phosphorus-P (mg/l) |
|---|---|---|---|---|---|---|---|---|---|---|
| January 1984 | 0 | | | | | | | | | |
| February 1984 | 0 | | | | | | | | | |
| March 1984 | 0 | | | | | | | | | |
| April 1984 | 0 | | | | | | | | | |
| May 1984 | 16 | 62.1 | 118.2 | 12.5 | 1090 | .08 | .03 | ---- | 7.93 | .69 |
| June 1984 | 12 | 52.8 | 107 | 8.8 | 1305 | ---- | .34 | .03 | 5.94 | 1.85 |
| July 1984 | 0 | | | | | | | | | |
| August 1984 | 0 | | | | | | | | | |
| September 1984 | 0 | | | | | | | | | |
| October 1984 | 0 | | | | | | | | | |
| November 1984 | 0 | | | | | | | | | |
| December 1984 | 0 | | | | | | | | | |
| January 1985 | 0 | | | | | | | | | |
| February 1985 | 0 | | | | | | | | | |
| March 1985 | 0 | | | | | | | | | |
| April 1985 | 0 | | | | | | | | | |
| May 1985 | 9 | 103 | 112 | 19.8 | 1360 | | N.D. | N.D. | 17.4 | 2.95 |
| June 1985 | 16 | 82 | 102 | 14.9 | 1267 | .42 | N.D. | N.D. | 16.4 | 2.59 |
| July 1985 | 2 | 52 | 92 | 6.0 | ---- | ---- | ---- | ---- | ---- | ---- |
| August 1985 | 0 | | | | | | | | | |

* monthly averages calculated by dividing by number of days discharge occurred during the month.

N.D. = Non-detectable

Table 29. Champion International Frenchtown Mill Self-Monitoring Data.

Part 2. Treated Wastewater Direct Discharge 003.

Monthly Averages *

| Month | No. of Days of Discharge | BOD (mg/l) | TSS (mg/l) | Flow (cfs) | Color (SCU) | $H_2S$ (mg/l) | Nitrate-N (mg/l) | Nitrite-N (mg/l) | Total KJLD-N (mg/l) | Total Phosphorus-P (mg/l) |
|---|---|---|---|---|---|---|---|---|---|---|
| January 1984 | 0 | | | | | | | | | |
| February 1984 | 0 | | | | | | | | | |
| March 1984 | 0 | | | | | | | | | |
| April 1984 | 24 | 35 | 55 | 11.6 | 1172 | — | 1.1 | — | 3.66 | 1.14 |
| May 1984 | 31 | 44 | 88 | 34 | 1092 | .06 | .09 | — | 5.78 | .83 |
| June 1984 | 30 | 56 | 102 | 31.8 | 1088 | .02 | .30 | .07 | 2.3 | 2.32 |
| July 1984 | 30 | 41 | 89 | 6.9 | 1197 | .01 | .28 | .11 | 3.7 | 2.94 |
| August 1984 | 31 | 39 | 80 | 1.9 | 1882 | .02 | .23 | .22 | 4.2 | 2.08 |
| September 1984 | 30 | 68 | 70 | 4.9 | 1550 | .01 | .48 | .05 | 7.0 | 2.80 |
| October 1984 | 31 | 61 | 66 | 6.0 | 1432 | .02 | <11 | .09 | 12.7 | 3.54 |
| November 1984 | 30 | 59 | 68 | 4.6 | 1385 | .03 | <.01 | .08 | 14.8 | 3.98 |
| December 1984 | 23 | 61 | 65 | 3.0 | 1372 | .01 | <.02 | <.01 | 14.9 | 3.95 |
| January 1985 | 13 | 62 | 66 | 1.2 | 1385 | .05 | <.02 | .02 | 15.22 | 4.00 |
| February 1985 | 15 | 70 | 76 | 1.1 | 1330 | 0.02 | <.16 | <.01 | 16.03 | 3.67 |
| March 1985 | 31 | 71 | 57 | 1.5 | 1464 | .50 | <.03 | .02 | 16.82 | 3.50 |
| April 1985 | 30 | 60 | 61 | 17.4 | 1030 | 1.74 | <.01 | .04 | 13.12 | 2.22 |
| May 1985 | 31 | 83 | 101 | 32.5 | 1242 | .14 | <.04 | .05 | 15.86 | 2.74 |
| June 1985 | 25 | 41 | 71 | 21.3 | 938 | .42 | <.05 | .01 | 12.71 | 1.83 |
| July 1985 | 0 | | | | | | | | | |
| August 1985 | 15 | 44 | 75 | 2.7 | 1940 | — | N.D. | .06 | 14.4 | 3.95 |

* monthly averages calculated by dividing by number of days discharge occurred during the month.

N.D. = Non-detectable

Table 29. Champion International Frenchtown Mill Self-Monitoring Data.

Part 3. Cooling Water Direct Discharge 004

Maximum Values

| Month | Flow (cfs) | Temp (° F) |
|---|---|---|
| January 1984 | 16.9 | 75 |
| February 1984 | 14.3 | 76 |
| March 1984 | 15.8 | 79 |
| April 1984 | 16.7 | 88 |
| May 1984 | 15.4 | 80 |
| June 1984 | 15.6 | 81 |
| July 1984 | 14.3 | 86 |
| August 1984 | 14.3 | 87 |
| September 1984 | 46.7 | 83 |
| October 1984 | 17.2 | 75 |
| November 1984 | 16.0 | 68 |
| December 1984 | 18.7 | 77 |
| January 1985 | 17.4 | 74 |
| February 1985 | 13.8 | 69 |
| March 1985 | 13.6 | 78 |
| April 1985 | 13.6 | 81 |
| May 1985 | 15.2 | 88 |
| June 1985 | 15.6 | 84 |
| July 1985 | 12.3 | 91 |
| August 1985 | 17.2 | 90 |

Table 29. Champion International Frenchtown Mill Self-Monitoring Data. Part 4. Groundwater Monitoring Wells

Individual Results by Well Number

| | 1 R | | | | | 2 R | | | | | 4 R | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month | BOD (mg/l) | Sodium (mg/l) | Color (SCU) | Total KJLD-N (mg/l) | Total P (mg/l) | BOD (mg/l) | Sodium (mg/l) | Color (SCU) | Total KJLD-N (mg/l) | Total P (mg/l) | BOD (mg/l) | Sodium (mg/l) | Color (SCU) | Total KJLD-N (mg/l) | Total P (mg/l) |
| February 1984 | 8 | 1520 | 1320 | — | — | 21 | 1790 | 1040 | — | — | 6 | 1690 | 1210 | — | — |
| April 1984 | 6 | 1490 | 1980 | — | — | 18 | 1690 | 1530 | — | — | 6 | 1750 | 1430 | — | — |
| June 1984 | 7 | 1430 | 1340 | — | — | 22 | 1590 | 1710 | — | — | 5 | 1690 | 1300 | — | — |
| July 1984 | 6 | 1630 | 1030 | — | — | 24 | 1500 | 1680 | — | — | 3 | 1630 | 900 | — | — |
| August 1984 | 6 | 1430 | 1210 | — | — | 28 | 1590 | 2130 | — | — | 3 | 1390 | 840 | — | — |
| October 1984 | 8 | 1450 | 1460 | — | — | 42 | 1840 | 2620 | — | — | 4 | 1630 | 1220 | — | — |
| December 1984 | 10 | 1490 | 1640 | 3.92 | 1.14 | 28 | 1530 | 1120 | 7.42 | 1.60 | 4 | 1280 | 1120 | 2.35 | 0.45 |
| February 1985 | 9 | 1460 | 2120 | — | — | 28 | 1550 | 1620 | — | — | 3 | 1480 | 990 | — | — |
| March 1985 | 9 | 1490 | 1770 | 3.25 | 1.25 | 25 | 1560 | 1180 | 9.18 | 1.23 | 4 | 1550 | 960 | 2.27 | 0.36 |
| May 1985 | 6 | 1590 | 1180 | — | — | 36 | 1420 | 2040 | — | — | 6 | 1680 | 980 | — | — |
| June 1985 | 6 | 1500 | 1040 | — | — | 30 | 1450 | 1700 | — | — | 8 | 1580 | 1160 | — | — |
| July 1985 | 9 | 1530 | 1290 | — | — | 26 | 1490 | 1620 | — | — | 10 | 1110 | 920 | — | — |

Table 29. (Continued)

Individual Results by Well Number

| Month | 423 BOD (mg/l) | 423 Sodium (mg/l) | 423 Color (SCU) | 423 Total KJLD-N (mg/l) | 423 Total P (mg/l) | 514 BOD (mg/l) | 514 Sodium (mg/l) | 514 Color (SCU) | 514 Total KJLD-N (mg/l) | 514 Total P (mg/l) |
|---|---|---|---|---|---|---|---|---|---|---|
| February 1984 | 4 | 1450 | 1070 | — | — | 2 | 470 | 280 | — | — |
| April 1984 | 2 | 810 | 1150 | — | — | 5 | 500 | 290 | — | — |
| June 1984 | 2 | 610 | 550 | — | — | 2 | 450 | 210 | — | — |
| July 1984 | 2 | 380 | 280 | — | — | 2 | 340 | 180 | — | — |
| August 1984 | 1 | 310 | 200 | — | — | 1 | 230 | 150 | — | — |
| October 1984 | 3 | — | 450 | — | — | 4 | — | 230 | — | — |
| December 1984 | 2 | 1020 | 920 | 1.51 | 0.50 | 2 | 500 | 270 | 4.17 | 0.50 |
| February 1985 | 3 | 1260 | 100 | — | — | 2 | 600 | 260 | — | — |
| March 1985 | 3 | 1320 | 620 | 1.93 | 0.58 | 2 | 570 | 220 | 1.62 | 0.34 |
| May 1985 | 3 | 1260 | 660 | — | — | 1 | 640 | 250 | — | — |
| June 1985 | 4 | 1310 | 640 | — | — | 4 | 610 | 290 | — | — |
| July 1985 | 6 | 1310 | 900 | — | — | [illegible] | 550 | 200 | — | — |

Table 29. (Continued)

Individual Results by Well Number

| Month | 5 R BOD (mg/1) | 5 R Sodium (mg/1) | 5 R Color (SCU) | 5 R Total KJLD-N (mg/1) | 5 R Total P (mg/1) | 404 BOD (mg/1) | 404 Sodium (mg/1) | 404 Color (SCU) | 404 Total KJLD-N (mg/1) | 404 Total P (mg/1) |
|---|---|---|---|---|---|---|---|---|---|---|
| February 1984 | 2 | 620 | 260 | — | — | 5 | 1550 | 1340 | — | — |
| April 1984 | 2 | 780 | 420 | — | — | 3 | 1420 | 1180 | — | — |
| June 1984 | 5 | 872 | 200 | — | — | 3 | 1530 | 1230 | — | — |
| July 1984 | 6 | 820 | 200 | — | — | 4 | 1560 | 1060 | — | — |
| August 1984 | 2 | 610 | 270 | — | — | 6 | 1450 | 1020 | — | — |
| October 1984 | 3 | — | 440 | — | — | 7 | — | 1260 | — | — |
| December 1984 | 2 | 400 | 420 | 1.99 | 0.52 | 4 | 1560 | 740 | 3.25 | 1.26 |
| February 1985 | 1 | 340 | 320 | — | — | 5 | 1590 | 900 | — | — |
| March 1985 | 1 | 37 | 190 | 1.29 | 0.26 | 4 | 1530 | 650 | 2.63 | 1.00 |
| May 1985 | 1 | 450 | 200 | — | — | 4 | 1580 | 850 | — | — |
| June 1985 | 1 | 450 | 190 | — | — | 6 | 1750 | 1110 | — | — |
| July 1985 | 4 | 360 | 210 | — | — | 4 | 1220 | 540 | — | — |

Table 29.
Part 5

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

MONTH DECEMBER 1984

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | [illegible] |
|---|---|---|---|---|---|---|---|---|
| 1 | 2659 | | | | [illegible] | 4 | [illegible] | [illegible] |
| | | | | | [illegible] | 4 | [illegible] | [illegible] |
| 2 | 2577 | | | | [illegible] | 3 | 8:30 | 7 |
| | | | | | 13:00 | 4 | 13:20 | 8 |
| 3 | 2294 | | | | 7:20 | 2 | 7:50 | 6 |
| | | | | | 11:20 | 3 | 11:45 | 8 |
| 4 | 1852 | | | | 7:20 | 4 | 7:50 | 9 |
| 5 | 1596 | 32.0 | | | 7:50 | 2 | 8:20 | 7 |
| 6 | 1453 | | | | 7:40 | 3 | 8:10 | 7 |
| 7 | 1476 | | | | 7:20 | 3 | 7:50 | 7 |
| 8 | 1658 | | 12.0 | 11.7 | 7:30 | 3 | 8:00 | 7 |
| 9 | 2190 | | | | 7:25 | 4 | 7:50 | 7 |
| | | | | | 13:30 | 3 | 14:00 | 6 |
| | | | | | 18:00 | 4 | 18:25 | 8 |
| 10 | 2827 | | | | 7:15 | 4 | 7:45 | 8 |
| | | | | | 11:20 | 2 | 11:45 | 6 |
| 11 | 2810 | | 11.8 | 11.7 | 7:00 | 5 | 7:30 | 8 |
| | | | | | 11:20 | 5 | 11:45 | 9 |
| 12 | 2675 | 32.4 | | | 7:15 | 4 | 7:45 | 9 |
| | | | | | 11:15 | 6 | 11:40 | 11 |
| 13 | 2609 | | | | 7:25 | 4 | 7:55 | 8 |
| | | | | | 11:20 | 3 | 11:45 | 8 |
| 14 | 2294 | | | | 7:10 | 4 | 7:40 | 8 |
| | | | | | 11:10 | 3 | 11:35 | 8 |
| 15 | 2356 | | | | 7:00 | 3 | 7:30 | 8 |
| | | | | | 11:00 | 4 | 11:25 | 8 |
| 16 | 2433 | | | | 7:00 | 3 | 7:30 | 7 |
| | | | | | 11:00 | 3 | 11:25 | 7 |
| 17 | 2003 | | | | 7:15 | 3 | 7:45 | 8 |
| | 1866 | | | | 11:15 | 4 | 11:45 | 8 |
| 18 | 1826 | | 12.0 | 12.0 | 7:00 | 4 | 7:30 | 7 |
| 19 | 1709 | 32.0 | | | 7:20 | 4 | 7:50 | 8 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH DECEMBER 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 20 | 1696 | | | | 8:25 | 4 | 8:55 | 6 |
| 21 | 1786 | | | | 8:30 | 3 | 8:55 | 6 |
| 22 | 2249 | | | | 7:00 | 3 | 7:25 | 6 |
| | | | | | 14:15 | 4 | 14:35 | 7 |
| 23 | 2465 | | | | 6:55 | 3 | 7:15 | 8 |
| | | | | | 11:35 | 3 | 12:05 | 8 |
| 24 | 2340 | | | | 6:35 | 4 | 6:55 | 8 |
| | | | | | 11:35 | 4 | 11:55 | 8 |
| 25 | 2074 | | 11.8 | 12.4 | 7:05 | 3 | 7:40 | 8 |
| | 2088 | | | | 11:05 | 3 | 11:30 | 8 |
| 26 | 2059 | | | | 8:15 | 4 | 8:40 | 8 |
| | | | | | 12:40 | 3 | 13:05 | 8 |
| 27 | 2340 | | | | 8:15 | 2 | 8:45 | 7 |
| | | | | | 13:20 | 2 | 13:50 | 7 |
| 28 | 2449 | 33.6 | | | 9:05 | 2 | 9:30 | 6 |
| | | | | | 13:10 | 2 | 13:35 | 6 |
| 29 | 2356 | | | | 7:25 | 4 | 7:45 | 9 |
| | | | | | 12:45 | 3 | 13:15 | 7 |
| 30 | 2325 | | | | 7:44 | 3 | 8:15 | 8 |
| | | | | | 11:51 | 3 | 12:20 | 9 |
| 31 | 2325 | | 12.0 | 12.0 | 7:15 | 3 | 7:45 | 8 |
| | | | | | 12:35 | 3 | 13:00 | 8 |

COMMENTS:

Table 29.5

SELF-MONITORING SUMMARY SHEET

Permittee Hoerner Waldorf Corp
Permit No. MT-00003[illegible]
Calendar Year

*Color Appendix
NCASL Std Color Units

| Site | Parameter | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Site 1 | Haypus | | | | | [illegible] | | | | | | | |
| | Marcue | | | | | | | | | | | | |
| | 6-mile | | | | | [illegible] | | | | | | | |
| Site 2 | Haypus | | | | | 10/11 | | | | | | | |
| | Marcue | | | | | | | | | | | | |
| | 6-mile | | 14 | | | [illegible] | | | | | | | |
| Site 3 | Haypus | | | | | [illegible] | | | | | | | |
| | Marcue | | | | | | | | | | | | |
| | 6-mile | | | | | [illegible] | | | | | | | |
| Site 4 | Haypus | | | | | [illegible] | | | | | | | |
| | Marcue | | | | | | | | | | | | |
| | 6-mile | | | | | 15/[illegible] | | | | | | | |
| Site 5 | Haypus | | | | | [illegible] | | | | | | | |
| | Marcue | | | | | | | | | | | | |
| | 6-mile | | | | | [illegible]/17 | | | | | | | |
| Site 6 | Haypus | | | | | [illegible]/11 | | | | | | | |
| | Marcue | | | | | | | | | | | | |
| | 6-mile | | | | | [illegible] | | | | | | | |
| Site 7 | Haypus | | | 8 | [illegible]/4 | [illegible] | | | | | | | |
| | Marcue | | | | | | | | | | | | |
| | 6-mile | | | 13 | 5/9 | [illegible]/13 | | | | | | | |
| Site 8 | Haypus | | | | 3/4 | 11/11 | | | | | | | |
| | Marcue | | | | | | | | | | | | |
| | 6-mile | | | | 7/7 | 15/13 | | | | | | | |
| Site 9 | Haypus | | | | 5/6 | 11/12 | | | | | | | |
| | Marcue | | | | | | | | | | | | |
| | 6-mile | | | | 9/9 | 15/17 | | | | | | | |
| Site 10 | Haypus | | | | 6/6/8 | 12/13 | | | | | | | |
| | Marcue | | | | [illegible] | | | | | | | | |
| | 6-mile | | | | 10/7/[illegible] | 16/17 | | | | | | | |

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

MONTH NOVEMBER 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 3109 | | 11.[illegible] | 11.[illegible] | 6:10 | 4 | 6:40 | 8 |
| | | | | | 10:20 | 4 | 10:45 | 9 |
| 2 | 3001 | | | | 7:05 | 4 | 7:35 | 8 |
| | | | | | 11:05 | 4 | 11:30 | 8 |
| 3 | 3387 | | | | 8:27 | 3 | 8:51 | 7 |
| | | | | | 12:02 | 3 | 12:25 | 7 |
| 4 | 3760 | | | | 8:20 | 7 | 3:47 | 10 |
| | | | | | 13:16 | 8 | 13:38 | 10 |
| 5 | 3561 | | | | 7:25 | 6 | 7:55 | 10 |
| | | | | | 11:25 | 6 | 11:50 | 10 |
| 6 | 3561 | | | | 7:10 | 5 | 7:45 | 10 |
| | | | | | 11:15 | 5 | 11:40 | 9 |
| 7 | 3218 | 38.7 | | | 7:25 | 5 | 7:55 | 9 |
| | | | | | 11:30 | 4 | 11:55 | 9 |
| 8 | 3182 | | 10.7 | 10.8 | 6:15 | 4 | 6:45 | 9 |
| | | | | | 13:15 | 4 | 13:40 | 9 |
| 9 | 3127 | | | | 9:05 | 4 | 9:30 | 8 |
| | | | | | 12:00 | 4 | 12:50 | 9 |
| 10 | 3055 | | | | 7:30 | 4 | 7:50 | 9 |
| | | | | | 11:35 | 4 | 12:00 | 8 |
| 11 | 3037 | | | | 7:55 | 4 | 8:20 | 8 |
| | | | | | 12:10 | 4 | 12:30 | 9 |
| 12 | 3019 | | | | 7:00 | 4 | 7:30 | 8 |
| | | | | | 11:25 | 4 | 11:50 | 9 |
| 13 | 2983 | | | | 7:15 | 4 | 7:45 | 9 |
| | | | | | 11:15 | 4 | 11:40 | 8 |
| 14 | 3055 | 40.2 | | | 7:20 | 4 | 7:50 | 8 |
| | | | | | 11:20 | 4 | 11:45 | 8 |
| 15 | 3037 | | 11.1 | 11.2 | 6:30 | 4 | 7:00 | 8 |
| | | | | | 10:30 | 4 | 10:55 | 8 |
| 16 | 2879 | | | | 9:10 | 4 | 9:30 | 8 |
| | | | | | 13:45 | 4 | 14:10 | 9 |

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH NOVEMBER 1984

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-[illegible] TIME | |
|---|---|---|---|---|---|---|---|---|
| 17 | 2827 | | | | [illegible] | 4 | [illegible] | [illegible] |
| | | | | | [illegible] | [illegible] | [illegible] | |
| 18 | 2879 | | | | 6:45 | 4 | 7:05 | [illegible] |
| | | | | | 11:00 | [illegible] | 11:25 | 8 |
| 19 | 2827 | | | | 7:20 | 4 | 7:50 | 8 |
| | | | | | 11:15 | 3 | 11:40 | [illegible] |
| 20 | 2844 | | | | [illegible] | 4 | [illegible] | 8 |
| | | | | | [illegible] | 3 | 11:40 | 8 |
| 21 | 2879 | 37.3 | | | 7:10 | 3 | 7:40 | 7 |
| | | | | | 11:10 | 3 | 11:25 | 8 |
| 22 | 2879 | | 11.2 | 11.1 | 6:41 | 4 | 7:43 | 8 |
| | | | | | 10:30 | 3 | 10:48 | 7 |
| 23 | 2827 | | | | 7:00 | 3 | 7:25 | 7 |
| | | | | | 11:00 | 4 | 11:20 | 8 |
| 24 | 2776 | | | | 7:10 | 4 | 7:45 | 8 |
| | | | | | 11:00 | 4 | 11:20 | 8 |
| 25 | 2810 | | | | 7:05 | 4 | 7:35 | 8 |
| | | | | | 11:00 | 4 | 11:20 | 8 |
| 26 | 2742 | | | | 8:55 | 4 | 9:15 | 7 |
| | | | | | 13:30 | 3 | 13:55 | 7 |
| 27 | 2708 | | | | 7:10 | 3 | 7:40 | 7 |
| | | | | | 11:10 | 3 | 11:35 | 7 |
| 28 | 2561 | 34.4 | | | 7:10 | 3 | 7:40 | 7 |
| | | | | | 11:10 | 3 | 11:35 | 8 |
| 29 | 2725 | | 11.6 | 11.7 | 6:40 | 3 | 7:10 | 7 |
| | | | | | 10:50 | 3 | 11:15 | 8 |
| 30 | 2776 | | | | 7:10 | 4 | 7:40 | 8 |
| | | | | | 11:10 | 4 | 11:35 | 8 |

COMMENTS:

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

MONTH OCTOBER 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 3740 | | | | 7:10 | 4 | 7:40 | 8 |
| | | | | | 11:10 | 5 | 11:35 | 9 |
| 2 | 3740 | | | | 7:05 | 5 | 7:35 | 9 |
| | | | | | 11:10 | 5 | 11:35 | 9 |
| 3 | 3720 | 49.7 | | | 7:05 | 6 | 7:35 | 10 |
| | | | | | 12:40 | 5 | 13:05 | 8 |
| 4 | 3561 | | | | 8:15 | 5 | 8:35 | 9 |
| | | | | | 11:35 | 4 | 11:10 | 8 |
| 5 | 3503 | | 8.6 | 9.0 | 6:53 | 5 | 7:18 | 10 |
| | | | | | 11:00 | 6 | 11:25 | 10 |
| 6 | 3368 | | | | 7:10 | 6 | 7:40 | 10 |
| | | | | | 11:45 | 6 | 12:10 | 10 |
| 7 | 3330 | | 9.1 | 9.2 | 7:00 | 2 | 7:40 | 7 |
| | | | | | 11:00 | 5 | 11:30 | 9 |
| 8 | 3274 | | | | 8:30 | 5 | 8:55 | 9 |
| | | | | | 14:10 | 4 | 14:35 | 9 |
| 9 | 3218 | | 9.0 | 8.7 | 6:50 | 5 | 7:25 | 9 |
| | | | | | 11:05 | 5 | 11:30 | 9 |
| 10 | 3145 | | | | 8:35 | 5 | 9:00 | 9 |
| | | | | | 13:20 | 5 | 13:40 | 9 |
| 11 | 3073 | 51.6 | 8.4 | 8.4 | 7:10 | 3 | 7:35 | 7 |
| | | | | | 13:05 | 4 | 13:30 | 9 |
| 12 | 3163 | | | | 8:50 | 4 | 9:15 | 8 |
| | | | | | 12:40 | 5 | 13:05 | 9 |
| 13 | 3163 | | 9.0 | 9.0 | 7:05 | 5 | 7:40 | 9 |
| | | | | | 11:10 | 5 | 11:50 | 10 |
| 14 | 3200 | | | | 7:20 | 5 | 7:40 | 9 |
| | | | | | 11:16 | 5 | 11:30 | 9 |
| 15 | 3368 | | | | 7:15 | 5 | 7:45 | 9 |
| | | | | | 11:15 | 4 | 11:45 | 8 |
| 16 | 3218 | | 9.9 | 9.9 | 6:15 | 5 | 7:15 | 9 |
| | | | | | 10:55 | 4 | 11:20 | 9 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH OCTOBER 1984

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | HARPER'S COLOR | SIX-MILE TIME | SIX-MILE COL[illegible] |
|---|---|---|---|---|---|---|---|---|
| 17 | 3293 | 41.4 | | | 7:30 | 4 | 7:55 | |
| | | | | | 11:[illegible] | 4 | 1:50 | |
| 18 | 3182 | | 10.4 | 10.2 | 6:40 | 5 | [illegible]:10 | |
| | | | | | 11:00 | 7 | 11:30 | 9 |
| 19 | 3163 | | | | 7:35 | 5 | 8:00 | 9 |
| | | | | | 11:00 | 4 | 11:45 | 8 |
| 20 | 3145 | | | | 4:20 | 5 | 4:45 | 9 |
| | | | | | 10:45 | 5 | 11:10 | 9 |
| 21 | 3145 | | | | 9:0[illegible] | 4 | 9:20 | 8 |
| | | | | | 12:40 | 4 | 13:05 | 8 |
| 22 | 3055 | | | | 8:10 | 4 | 8:35 | 8 |
| | | | | | 13:15 | 4 | 13:40 | 8 |
| 23 | 3019 | | | | 8:10 | 4 | 8:40 | 8 |
| | | | | | 13:05 | 4 | 13:25 | 8 |
| 24 | 3019 | | | | 8:40 | 4 | 9:00 | 8 |
| | | | | | 12:50 | 4 | 13:15 | 8 |
| 25 | 2966 | 42.6 | 10.4 | 10.3 | 7:20 | 3 | 7:45 | 8 |
| | | | | | 12:50 | 4 | 13:20 | 8 |
| 26 | 3073 | | | | 9:00 | 6 | 9:20 | 9 |
| | | | | | 13:55 | 3 | 14:15 | 7 |
| 27 | 3255 | | | | 7:30 | 4 | 8:00 | 8 |
| | | | | | 12:45 | 4 | 13:15 | 8 |
| 28 | 3312 | | | | 6:00 | 4 | 6:30 | 8 |
| | | | | | 12:30 | 4 | 13:30 | 8 |
| 29 | 3274 | | | | 7:25 | 4 | 7:55 | 8 |
| | | | | | 11:25 | 5 | 11:50 | 9 |
| 30 | 3127 | | | | 7:15 | 4 | 7:45 | 8 |
| | | | | | 11:15 | 5 | 11:40 | 9 |
| 31 | 3109 | 39.0 | | | 7:35 | 5 | 8:05 | 9 |
| | | | | | 11:35 | 5 | 12:05 | 9 |
| | | | | | | | | |

COMMENTS:

Table 29.5.

**Champion**

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA

MONTH SEPTEMBER 19 84

| ATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 2983 | | | | 8:07 | 7 | 8:30 | 9 |
| | | | | | 12:54 | 7 | 13:30 | 9 |
| 2 | 3561 | | 8.1 | 8.2 | 6:10 | 9 | 6:31 | 12 |
| | | | | | 12:05 | 9 | 12:25 | 12 |
| 3 | 3445 | | | | 9:20 | 9 | 9:47 | 13 |
| | | | | | 13:40 | 8 | 14:00 | 12 |
| 4 | 3218 | | 7.8 | 7.9 | 6:15 | 8 | 6:40 | 12 |
| | | | | | 14:27 | 8 | 14:52 | 12 |
| 5 | 3037 | 62.5 | | | 7:25 | 7 | 7:47 | 12 |
| | | | | | 13:55 | 7 | 14:25 | 12 |
| 6 | 3001 | | 7.3 | 7.2 | 6:20 | 7 | 6:50 | 11 |
| | | | | | 13:10 | 7 | 13:35 | 10 |
| 7 | 2948 | | | | 8:55 | 7 | 9:15 | 11 |
| | | | | | 13:30 | 8 | 13:55 | 11 |
| 8 | 3182 | | 8.4 | 8.5 | 6:25 | 7 | 6:45 | 10 |
| | | | | | 10:55 | 7 | 11:20 | 10 |
| 9 | 3182 | | | | 7:25 | 7 | 7:45 | 10 |
| | | | | | 12:53 | 7 | 13:35 | 10 |
| 10 | 3561 | | 8.3 | 8.2 | 5:40 | 6 | 6:10 | 9 |
| | | | | | 9:40 | 7 | 10:10 | 10 |
| 11 | 3406 | | | | 8:05 | 7 | 8:30 | 11 |
| | | | | | 13:00 | 7 | 13:25 | 12 |
| 12 | 3274 | 52.7 | 8.3 | 8.3 | 6:20 | 6 | 6:45 | 10 |
| | | | | | 9:40 | 6 | 10:45 | 11 |
| 13 | 3182 | | | | 7:10 | 6 | 7:35 | 10 |
| | | | | | 12:35 | 6 | 13:05 | 9 |
| 14 | 3163 | | 8.7 | 8.7 | 5:50 | 8 | 6:20 | 11 |
| | | | | | 9:50 | 6 | 10:20 | 10 |
| 15 | 3091 | | | | 9:07 | 6 | 9:30 | 10 |
| | | | | | 13:50 | 5 | 14:20 | 9 |
| 16 | 3182 | | 8.3 | 8.3 | 6:55 | 6 | 7:15 | 10 |
| | | | | | 11:45 | 6 | 12:30 | 10 |

Table 29.5.

**Champion**
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH SEPTEMBER 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | HARPER'S COLOR | SIX-MILE TIME | SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 17 | 3127 | | | | 7:20 | 5 | .50 | |
| | | | | | 11 | 5 | 1:40 | 9 |
| 18 | 3037 | | 7.9 | 7.9 | 5:00 | 6 | 5:30 | 9 |
| | | | | | 9:05 | 6 | 9:30 | 10 |
| 19 | 2913 | 57.6 | | | 7:00 | 6 | 7:30 | 11 |
| | | | | | 12:15 | 6 | 12:40 | 10 |
| 20 | 3001 | | 7.8 | 7.8 | 5:05 | 6 | 5:35 | 10 |
| | | | | | 9:35 | 6 | 10:00 | 10 |
| 21 | 3182 | | | | 8:55 | 6 | 9:20 | 10 |
| | | | | | 13:10 | 6 | 13:30 | 10 |
| 22 | 3821 | | 8.8 | 8.8 | 6:45 | 7 | 7:15 | 10 |
| | | | | | 13:15 | 8 | 13:35 | 10 |
| 23 | 3966 | | | | 7:00 | 8 | 7:20 | 11 |
| | | | | | 11:10 | 7 | 11:30 | 11 |
| 24 | 3862 | | 9.8 | 9.9 | 6:10 | 7 | 6:35 | 11 |
| | | | | | 10:10 | 7 | 10:35 | 10 |
| 25 | 3821 | | | | 7:15 | 7 | 7:40 | 10 |
| | | | | | 11:15 | 6 | 11:40 | 10 |
| 26 | 3780 | 47.7 | 9.5 | 9.5 | 6:10 | 6 | 6:40 | 9 |
| | | | | | 10:15 | 7 | 10:40 | 11 |
| 27 | 3821 | | | | 7:15 | 5 | 7:40 | 9 |
| | | | | | 11:15 | 6 | 11:40 | 10 |
| 28 | 3862 | | 10.1 | 10.1 | 6:15 | 5 | 6:45 | 9 |
| | | | | | 10:15 | 5 | 10:40 | 9 |
| 29 | 3862 | | | | 6:20 | 5 | 6:55 | 9 |
| | | | | | 11:00 | 5 | 11:30 | 9 |
| 30 | 3760 | | | | 7:00 | 4 | 7:30 | 8 |
| | | | | | 11:15 | 4 | 11:40 | 8 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

COMMENTS:

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER NUTRIENT DATA

MONTH SEPTEMBER 1984

| DAY | TOTAL KJELDAHL NITROGEN (mg/l) | | TOTAL PHOSPHORUS (mg/l) | | NITRATE (mg/l) | | NITRITE (mg/l) | |
|---|---|---|---|---|---|---|---|---|
| | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | 0.09 | 0.07 | 0.13 | 0.11 | 0.08 | 0.05 | $<0.01$ | $<0.01$ |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | 0.16 | 0.18 | 0.07 | 0.07 | 0.04 | 0.04 | $<0.01$ | $<0.01$ |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | 0.27 | 0.24 | 0.10 | 0.10 | 0.04 | 0.04 | $<0.01$ | $<0.01$ |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | 0.32* | 0.45* | 0.07 | 0.07 | 0.12 | 0.10 | $<0.01$ | $<0.01$ |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |

OMMENTS: *Values reflect increased digestion time.

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

MONTH AUGUST 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLC |
|---|---|---|---|---|---|---|---|---|
| 1 | 3560 | 64.8 | 7.0 | 7.1 | 5:00 | 9 | 5:30 | 10 |
| | | | | | 9:10 | 8 | 9:40 | 9 |
| 2 | 3350 | | | | 7:05 | 5 | 7:35 | 8 |
| | | | | | 11:05 | 7 | 11:30 | 8 |
| 3 | 3540 | | 7.4 | 7.3 | 5:00 | 7 | 5:30 | 10 |
| | | | | | 9:00 | 8 | 9:25 | 10 |
| 4 | 3350 | | | | 8:00 | 8 | 8:30 | 10 |
| | | | | | 12:00 | 7 | 12:20 | 10 |
| 5 | 3290 | | 7.3 | 7.2 | 5:40 | 8 | 6:00 | 10 |
| | | | | | 9:55 | 8 | 10:20 | 10 |
| 6 | 3190 | | | | 7:06 | 8 | 7:35 | 10 |
| | | | | | 11:05 | 8 | 11:30 | 11 |
| 7 | 3150 | | 7.4 | 7.5 | 5:10 | 8 | 5:40 | 10 |
| | | | | | 9:35 | 7 | 10:00 | 10 |
| 8 | 2990 | 62.3 | | | 7:15 | 7 | 7:40 | 10 |
| | | | | | 12:15 | 7 | 12:45 | 10 |
| 9 | 2840 | | 7.4 | 7.4 | 5:25 | 7 | 5:50 | 10 |
| | | | | | 11:00 | 6 | 11:45 | 9 |
| 10 | 2913 | | | | 7:35 | 6 | 8:00 | 10 |
| | | | | | 11:10 | 7 | 11:35 | 10 |
| 11 | 2827 | | 7.4 | 7.3 | 5:53 | 7 | 6:30 | 10 |
| | | | | | 11:17 | 6 | 11:58 | 10 |
| 12 | 2810 | | | | 10:30 | 7 | 11:00 | 10 |
| | | | | | 15:45 | 7 | 16:20 | 10 |
| 13 | 2879 | | 7.6 | 7.4 | 5:45 | 7 | 6:10 | 10 |
| | | | | | 12:40 | 6 | 13:10 | 9 |
| 14 | 3019 | | | | 8:15 | 7 | 9:05 | 9 |
| | | | | | 14:45 | 7 | 15:10 | 10 |
| 15 | 2931 | | 7.4 | 7.3 | 5:50 | 7 | 6:15 | 9 |
| | | | | | 10:00 | 6 | 10:20 | 9 |
| 16 | 2896 | 65.5 | | | 8:00 | 7 | 8:20 | 10 |
| | | | | | 13:55 | 7 | 14:20 | 9 |

Table 29.5.

**Champion**
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH AUGUST 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) | | COLOR (SCU) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | HARPER'S | SIX-MILE | HARPER'S TIME | HARPER'S COLOR | SIX-MILE TIME | SIX-MILE COLOR |
| 17 | 2879 | | 7.4 | 7.6 | 6:00 | 6 | 6:25 | 10 |
| | | | | | 13:00 | 8 | 13:55 | 10 |
| 18 | 2861 | | | | 9:45 | 7 | 10:15 | 10 |
| | | | | | 13:00 | 7 | 13:30 | 10 |
| 19 | 2810 | | 7.3 | 7.4 | 5:40 | 7 | 6:05 | 11 |
| | | | | | 12:35 | 7 | 13:15 | 11 |
| 20 | 2810 | | | | 11:05 | 7 | 11:30 | 9 |
| | | | | | 14:05 | 8 | 14:35 | 10 |
| 21 | 2675 | | 7.4 | 7.4 | 5:30 | 6 | 6:00 | 10 |
| | | | | | 9:45 | 6 | 10:10 | 10 |
| 22 | 2642 | 60.8 | | | 7:15 | 7 | 7:55 | 9 |
| | | | | | 13:05 | 6 | 13:35 | 9 |
| 23 | 2577 | | 7.2 | 7.6 | 5:30 | 6 | 6:00 | 10 |
| | | | | | 9:35 | 6 | 10:05 | 10 |
| 24 | 2544 | | | | 7:20 | 5 | 7:50 | 9 |
| | | | | | 13:10 | 5 | 13:40 | 8 |
| 25 | 2544 | | 7.4 | 7.6 | 4:19 | 7 | 4:50 | 10 |
| | | | | | 8:00 | 7 | 8:20 | 10 |
| 26 | 2561 | | | | 7:16 | 7 | 7:46 | 12 |
| | | | | | 12:10 | 7 | 12:45 | 11 |
| 27 | 2496 | | 7.2 | 7.4 | 5:20 | 6 | 5:40 | 10 |
| | | | | | 9:25 | 6 | 9:50 | 9 |
| 28 | 2465 | | | | 7:15 | 4 | 7:45 | 7 |
| | | | | | 12:45 | 6 | 13:10 | 10 |
| 29 | 2402 | 57.5 | 7.6 | 8.0 | 5:25 | 6 | 5:55 | 10 |
| | | | | | 9:30 | 6 | 10:15 | 10 |
| 30 | 2264 | | | | 7:15 | 6 | 7:45 | 10 |
| | | | | | 12:30 | 5 | 13:00 | 9 |
| 31 | 2386 | | 7.6 | 7.8 | 5:30 | 5 | 6:00 | 9 |
| | | | | | 10:15 | 4 | 10:40 | 8 |
| | | | | | | | | |

COMMENTS:

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER NUTRIENT DATA

MONTH AUGUST 19 84

| DAY | TOTAL KJELDAHL NITROGEN (mg/l) | | TOTAL PHOSPHORUS (mg/l) | | NITRATE (mg/l) | | NITRITE (mg/l) | |
|---|---|---|---|---|---|---|---|---|
| | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE |
| 1 | 0.13 | 0.38 | 0.09 | 0.12 | 0.06 | 0.04 | < 0.01 | < 0.01 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | 0.23 | 0.13 | -* | -* | 0.06 | 0.02 | < 0.01 | < 0.01 |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | 0.17 | 0.08 | 0.13 | 0.15 | < 0.01 | 0.01 | 0.05 | 0.05 |
| 16 | | | | | 0.02** | 0.04** | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | 0.10 | 0.12 | 0.11 | 0.09 | 0.06 | 0.05 | < 0.01 | < 0.01 |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | 0.17 | 0.18 | 0.13 | 0.11 | 0.03 | 0.04 | 0.03 | 0.04 |
| 30 | | | | | | | | |
| 31 | | | | | | | | |

COMMENTS: *Test failed.

**Recheck.

Table 29.5.

**Champion**

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA

MONTH July 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 16600 | | | | 5:55 | 11 | 6:25 | 14 |
| | | | | | 10:35 | 14 | 11:25 | 18 |
| 2 | 13900 | | 8.6 | 8.5 | 4:15 | 14 | 4:45 | 17 |
| | | | | | 8:30 | 12 | 8:55 | 16 |
| 3 | 12600 | | | | 7:10 | 11 | 7:40 | 15 |
| | | | | | 11:05 | 11 | 11:30 | 15 |
| 4 | 11600 | | 8.2 | 8.3 | 4:40 | 13 | 5:15 | 15 |
| | | | | | 12:00 | 13 | 12:30 | 17 |
| 5 | 10800 | | | | 13:25 | 13 | 13:50 | 14 |
| | | | | | 15:18 | 11 | 15:40 | 14 |
| 6 | 10300 | | 7.7 | 7.9 | 4:40 | 13 | 5:05 | 15 |
| | | | | | 10:45 | 12 | 11:10 | 15 |
| 7 | 9950 | | | | 10:00 | 10 | 10:30 | 13 |
| | | | | | 14:00 | 12 | 14:30 | 14 |
| 8 | 9160 | | 7.9 | 8.2 | 4:40 | 10 | 5:15 | 13 |
| | | | | | 15:45 | 10 | 16:15 | 13 |
| 9 | 8220 | | | | 8:20 | 10 | 8:45 | 11 |
| | | | | | 13:00 | 10 | 13:25 | 12 |
| 10 | 7700 | | 7.8 | 8.1 | 5:20 | 10 | 5:45 | 11 |
| | | | | | 13:25 | 8 | 13:50 | 10 |
| 11 | 7110 | 64.0 | | | 8:50 | 8 | 9:15 | 10 |
| | | | | | 13:48 | 8 | 14:11 | 9 |
| 12 | 6540 | | 7.6 | 7.7 | 5:15 | 10 | 5:40 | 11 |
| | | | | | 15:45 | 6 | 16:15 | 8 |
| 13 | 6380 | | | | 9:30 | 8 | 9:50 | 9 |
| | | | | | 14:50 | 8 | 15:10 | 10 |
| 14 | 6010 | | 7.6 | 7.8 | 5:10 | 9 | 5:40 | 12 |
| | | | | | 11:50 | 9 | 12:10 | 11 |
| 15 | 5600 | | | | 6:55 | 9 | 7:15 | 12 |
| | | | | | 14:00 | 9 | 14:20 | 12 |
| 16 | 5260 | | 7.4 | 7.6 | 4:40 | 9 | 5:10 | 12 |
| | | | | | 13:20 | 9 | 13:45 | 13 |

Table 29.5.

**Champion**
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH July 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 17 | 5020 | | | | 7:10 | 8 | 7:40 | 12 |
| | | | | | 11:15 | 8 | 11:40 | 12 |
| 18 | 4790 | 65.2 | 7.2 | 7.3 | 4:30 | 8 | 5:00 | 12 |
| | | | | | 10:00 | 8 | 10:25 | 13 |
| 19 | 4560 | | | | 7:10 | 8 | 7:40 | 11 |
| | | | | | 11:10 | 8 | 11:40 | 11 |
| 20 | 4430 | | 7.4 | 7.4 | 4:40 | 8 | 5:10 | 13 |
| | | | | | 9:00 | 8 | 9:25 | 12 |
| 21 | 4240 | | | | 7:04 | 8 | 7:30 | 12 |
| | | | | | 12:25 | 6 | 12:53 | 9 |
| 22 | 4090 | | 7.5 | 7.7 | 4:30 | 9 | 5:00 | 11 |
| | | | | | 10:30 | 7 | 11:00 | 11 |
| 23 | 3790 | | | | 8:00 | 7 | 8:30 | 11 |
| | | | | | 15:30 | 8 | 15:55 | 11 |
| 24 | 3730 | | 7.7 | 7.8 | 5:20 | 8 | 5:45 | 11 |
| | | | | | 11:05 | 7 | 11:30 | 8 |
| 25 | 3730 | 62.0 | | | 7:10 | 10 | 7:40 | 12 |
| | | | | | 12:55 | 7 | 14:15 | 8 |
| 26 | 3590 | | 7.1 | 7.0 | 5:00 | 7 | 5:50 | 9 |
| | | | | | 8:50 | 8 | 9:30 | 9 |
| 27 | 3440 | | | | 7:05 | 7 | 7:30 | 9 |
| | | | | | 11:05 | 7 | 11:30 | 8 |
| 28 | 3590 | | 7.0 | 7.0 | 5:20 | 8 | 5:45 | 10 |
| | | | | | 10:20 | 8 | 10:45 | 9 |
| 29 | 3610 | | | | 8:00 | 8 | 8:20 | 9 |
| | | | | | 12:40 | 7 | 13:05 | 9 |
| 30 | 3730 | | 7.3 | 7.4 | 4:50 | 8 | 5:20 | 10 |
| | | | | | 9:00 | 8 | 9:25 | 10 |
| 31 | 3750 | | | | 7:50 | 8 | 8:15 | 9 |
| | | | | | 13:30 | 7 | 14:00 | 8 |
| | | | | | | | | |

COMMENTS: The river temperature for the week of July 2 was inadvertently missed.

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER NUTRIENT DATA

MONTH July 19 84

| Y | TOTAL KJELDAHL NITROGEN (mg/l) HARPER'S | SIX-MILE | TOTAL PHOSPHORUS (mg/l) HARPER'S | SIX-MILE | NITRATE (mg/l) HARPER'S | SIX-MILE | NITRITE (mg/l) HARPER'S | SIX-MILE |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | 0.10 | 0.09 | N.D. | N.D. | 0.08 | 0.05 | 0.0021 | 0.0020 |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 0 | | | | | | | | |
| 1 | 0.17 | 0.15 | 0.07 | 0.06 | 0.09 | 0.09 | 0.0022 | 0.0022 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | 0.24 | 0.14 | 0.23 | 0.32 | 0.09 | 0.07 | 0.0023 | 0.0026 |
| 9 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | 0.35 | 0.13 | 0.14 | 0.16 | 0.06 | 0.04 | --* | --* |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |

OMMENTS: N.D. = none detected.
*Test failed.

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

MONTH June 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 29700 | | | | 7:25 | 34 | 7:50 | [illegible] |
| | | | | | 10:15 | 32 | 10:40 | [illegible] |
| | | | | | 14. [illegible] | 29 | 14:25 | [illegible] |
| 2 | 24600 | | 9.7 | 9.5 | 5:20 | 22 | 5:45 | [illegible] |
| | | | | | 11:00 | 19 | 11:45 | 25 |
| 3 | 20900 | | | | 7:43 | 16 | 8:09 | 21 |
| | | | | | 11:20 | 17 | 12:35 | 22 |
| 4 | 19000 | | 9.2 | 9.1 | 4:20 | -* | 4:50 | -* |
| | | | | | 8:50 | 18 | 9:20 | 23 |
| | | | | | 11.1 | 19 | 12:00 | 24 |
| | | | | | 15:55 | 14 | 16:15 | 20 |
| 5 | 18100 | | | | 7:15 | 13 | 7:45 | 18 |
| | | | | | 11:10 | 16 | 11:40 | 20 |
| 6 | 19100 | 49.9 | 9.4 | 9.4 | 4:15 | 17 | 4:45 | 22 |
| | | | | | 8:55 | 17 | 9:50 | 21 |
| 7 | 18100 | | | | 7:20 | 17 | 7:50 | 21 |
| | | | | | 13:40 | 16 | 14:10 | 22 |
| 8 | 17100 | | 9.8 | 9.7 | 4:15 | 15 | 4:45 | 19 |
| | | | | | 9:10 | 17 | 10:00 | 21 |
| 9 | 15700 | | | | 9:35 | 16 | 9:55 | 20 |
| | | | | | 13:35 | 15 | 13:55 | 20 |
| 10 | 14400 | | 9.5 | 9.4 | 4:45 | 13 | 5:10 | 17 |
| | | | | | 9:00 | 13 | 9:20 | 18 |
| 11 | 1[illegible]00 | | | | 7:20 | 12 | 7:50 | 16 |
| | | | | | 11:00 | 12 | 11:40 | 15 |
| 12 | 16100 | | 9.5 | 9.4 | 4:15 | 13 | 4:45 | 16 |
| | | | | | 10:15 | 14 | 11:10 | 19 |
| 13 | 17100 | 52.1 | | | 7:15 | 18 | 7:45 | 19 |
| | | | | | 13:15 | 18 | 14:10 | 21 |
| 14 | 18500 | | 9.1 | 9.2 | 4:05 | 15 | 4:35 | 18 |
| | | | | | 9:40 | 16 | 10:40 | 20 |
| 15 | 20100 | | | | 7:10 | 15 | 7:40 | 19 |

*Tests failed - river resampled.

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH June 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 15 | | | | | 10:10 | 15 | 11:40 | 19 |
| 16 | 21200 | | 8.7 | 8.7 | 4:35 | 17 | 5:10 | 21 |
| | | | | | 11:10 | 17 | 11:35 | 21 |
| 17 | 22700 | | | | 7:10 | 17 | 7:30 | 20 |
| | | | | | 11:15 | 17 | 11:35 | 21 |
| 18 | 22900 | | 8.9 | 8.9 | 4:00 | 17 | 4:30 | 21 |
| | | | | | 9:45 | 17 | 11:00 | 21 |
| 19 | 20900 | | | | 7:10 | 16 | 7:40 | 20 |
| | | | | | 10:40 | 16 | 11:35 | 19 |
| 20 | 20100 | 57.8 | 8.8 | 8.8 | 4:00 | 16 | 4:25 | 18 |
| | | | | | 9:35 | 15 | 10:50 | 17 |
| 21 | 22200 | | | | 7:15 | 17 | 7:45 | 20 |
| | | | | | 10:15 | 17 | 11:30 | 20 |
| 22 | 28400 | | 9.2 | 9.2 | 4:05 | 27 | 4:35 | 29 |
| | | | | | 10:15 | 30 | 11:30 | 32 |
| 23 | 26500 | | | | 7:00 | 29 | 7:20 | 32 |
| | | | | | 10:45 | 35 | 11:30 | 38 |
| 24 | 22300 | | 8.8 | 8.9 | 4:45 | 25 | 5:15 | 29 |
| | | | | | 8:45 | 24 | 9:10 | 28 |
| 25 | 20700 | | | | 7:10 | 17 | 7:40 | 21 |
| | | | | | 11:00 | 18 | 11:30 | 23 |
| 26 | 21200 | | 8.4 | 8.4 | 4:10 | 20 | 4:40 | 25 |
| | | | | | 9:15 | 21 | 9:55 | 25 |
| 27 | 20800 | 60.0 | | | 7:05 | 20 | 7:35 | 25 |
| | | | | | 11:00 | 21 | 11:25 | 27 |
| 8 | 20700 | | 8.6 | 8.7 | 4:00 | -* | 4:30 | -* |
| | | | | | 9:00 | 15 | 9:25 | 18 |
| | | | | | 11:00 | 14 | 11:30 | 19 |
| 9 | 19200 | | | | 7:10 | 16 | 7:35 | 20 |
| | | | | | 11:10 | 15 | 11:35 | 19 |
| 0 | 18100 | | 8.7 | 8.8 | 4:30 | 12 | 4:55 | 17 |
| | | | | | 10:05 | 14 | 10:30 | 17 |

Test failed - river resampled.

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA

MONTH MAY 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 5850 | | | | 7:50 | 12 | 8:20 | [illegible] |
| | | | | | 13:45 | 12 | 14:15 | [illegible] |
| 2 | 5750 | 49.0 | | | 7:[illegible] | 10 | 13 | [illegible] |
| | | | | | 11:20 | 11 | 11:50 | 16 |
| 3 | 5480 | | | | 7:40 | 12 | 8:10 | 17 |
| | | | | | 13:35 | 13 | 14:15 | 18 |
| 4 | 5480 | | | | 7:50 | 11 | 8:20 | 15 |
| | | | | | 14:20 | 13 | 14:40 | 17 |
| 5 | 5480 | | | | 6:50 | 12 | 7:29 | 17 |
| | | | | | 12:01 | 12 | 12:28 | 17 |
| 6 | 5020 | | 9.7 | 10.0 | 5:45 | 12 | 6:10 | 16 |
| | | | | | 12:20 | 11 | 12:50 | 17 |
| 7 | 4810 | | | | 7:40 | 12 | 8:10 | 17 |
| | | | | | 11:05 | 13 | 11:35 | 18 |
| 8 | 4630 | | 9.5 | 9.8 | 4:45 | 11 | 5:15 | 15 |
| | | | | | 11:20 | 11 | 11:50 | 16 |
| 9 | 4560 | 51.3 | | | 7:30 | 11 | 8:00 | 15 |
| | | | | | 11:00 | 12 | 11:30 | 17 |
| 10 | 4950 | | 8.8 | 9.0 | 5:05 | 12 | 5:30 | 16 |
| | | | | | 14:25 | 13 | 14:50 | 17 |
| 11 | 5480 | | | | 9:25 | 13 | 9:50 | 16 |
| | | | | | 14:40 | 13 | 15:05 | 17 |
| 12 | 5630 | | 9.0 | 9.0 | 5:20 | 13 | 5:50 | 18 |
| | | | | | 9:30 | 12 | 9:55 | 16 |
| 13 | 6740 | | | | 9:00 | 15 | 9:37 | 18 |
| | | | | | 14:35 | 16 | 15:00 | 20 |
| 14 | 8930 | | 8.6 | 8.6 | 4:45 | 17 | 5:15 | 20 |
| | | | | | 14:55 | 18 | 15:15 | 22 |
| 15 | 13900 | | | | 7:30 | 24 | 8:00 | 26 |
| | 15300 | | | | 12:55 | 25 | 13:25 | 30 |
| 16 | 21200 | 46.3 | 10.0 | 9.7 | 4:40 | 39 | 5:10 | 42 |
| | | | | | 12:45 | 42 | 13:15 | 49 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH MAY 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 16 | | | | | 14:35 | 38 | 15:05 | 43 |
| 17 | 23700 | | | | 7:30 | 40 | 8:05 | 43 |
| | | | | | 13:40 | 38 | 14:10 | 43 |
| 18 | 21200 | | 9.8 | 9.6 | 4:45 | 34 | 5:15 | 38 |
| | | | | | 10:05 | 26 | 10:35 | 34 |
| 19 | 18900 | | | | 7:05 | 25 | 7:25 | 32 |
| | | | | | 13:50 | 24 | 14:10 | 30 |
| 20 | 19100 | | 9.4 | 9.2 | 5:15 | 24 | 5:45 | 28 |
| | | | | | 10:50 | 22 | 11:15 | 27 |
| 21 | 23200 | | | | 7:25 | 26 | 7:55 | 30 |
| | | | | | 12:55 | 32 | 13:25 | 37 |
| 22 | 22300 | | 10.0 | 10.0 | 4:40 | 26 | 5:10 | 31 |
| | | | | | 9:15 | 37 | 9:45 | 40 |
| 23 | 19500 | 49.4 | | | 7:30 | 31 | 8:00 | 36 |
| | | | | | 11:00 | 29 | 11:30 | 40 |
| | | | | | 13:10 | 29 | 13:40 | 36 |
| 24 | 20100 | | 9.7* | 9.8* | 7:30 | 22 | 8:15 | 26 |
| | | | | | 11:45 | 26 | 12:15 | 30 |
| 25 | 19000 | | | | 7:25 | 21 | 7:55 | 27 |
| | | | | | 13:45 | 23 | 14:13 | 28 |
| 26 | 16500 | | | | 7:35 | 19 | 8:00 | 24 |
| | | | | | 12:30 | 18 | 13:00 | 23 |
| 27 | 15500 | | | | 7:30 | 18 | 7:55 | 23 |
| | | | | | 12:01 | 17 | 12:53 | 22 |
| 28 | 15000 | | | | 7:25 | 16 | 7:50 | 20 |
| | | | | | 14:05 | 16 | 14:30 | 22 |
| 29 | 14800 | | 8.9 | 9.2 | 4:30 | 20 | 5:00 | 25 |
| | | | | | 9:50 | 16 | 10:20 | 21 |
| 30 | 16600 | 55.7 | | | 7:25 | 16 | 7:55 | 21 |
| | | | | | 12:45 | 17 | 13:15 | 21 |

COMMENTS:

*Samples split with State; samples collected after sunrise.

Table 29.5.

Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH MAY 1984

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) | | COLOR (SCU) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | HARPER'S | | SIX-MILE | |
| | | | HARPER'S | SIX-MILE | TIME | COLOR | TIME | COLOR |
| 31 | 23500 | | 9.0 | 8.9 | 4:[illegible] | 20 | 4:50 | [illegible] |
| | | | | | 9:15 | 20 | 9:[illegible] | [illegible] |
| | | | | | [illegible] | 22 | 15:10 | [illegible] |

COMMENTS:

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

MONTH APRIL 1984

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 4/1 | 3330 | | | | | | | |
| 4/2 | 3190 | | | | | | | |
| 4/3 | 3200 | | | | | | | |
| 4/4 | 3170 | 45.7 | | | | | | |
| 4/5 | 3150 | | | | | | | |
| 4/6 | 3150 | | | | | | | |
| 4/7 | 3420 | | | | 1050 | 3 | 1120 | 8 |
| | | | | | 1900 | 4 | 1925 | 9 |
| 4/8 | 3520 | | 8.7 | 8.8 | 0526 | 3 | 0557 | 7 |
| | | | | | 1052 | 4 | 1112 | 7 |
| 4/9 | 3610 | | | | 0750 | 5 | 0820 | 9 |
| | | | | | 1320 | 6 | 1350 | 9 |
| 4/10 | 3710 | | 9.8 | 10.0 | 0455 | 6 | 0525 | 10 |
| | | | | | 0940 | 6 | 1005 | 7 |
| | | | | | 1140 | 8 | 1210 | 12 |
| 4/11 | 3610 | 43.5 | | | 0730 | 8 | 0755 | 12 |
| | | | | | 1400 | 1 | 1430 | 4 |
| 4/12 | 3540 | | 10.4 | 10.4 | 0445 | 9 | 0515 | 11 |
| | | | | | 1415 | 10 | 1435 | 15 |
| 4/13 | 352[illegible] | | | | 0745 | 8 | 0815 | 13 |
| | | | | | 1400 | 7 | 1230 | 12 |
| 4/14 | 3390 | | | | 0655 | 8 | 0715 | 13 |
| | | | | | 1125 | 6 | 1145 | 11 |
| 4/15 | 3350 | | | | 0730 | 5 | 0755 | 9 |
| | | | | | 1445 | 4 | 1509 | 10 |
| 4/16 | 3560 | | | | 0815 | 4 | 0840 | 9 |
| | | | | | 1445 | 5 | 1500 | 10 |
| 4/17 | 3520 | | | | 0800 | 6 | 0845 | 12 |
| | | | | | 1640 | 9 | 1655 | 11 |
| 4/18 | 4130 | (Sample Missed) | 9.0 | 8.8 | 0430 | 12 | 0505 | 15 |
| | | | | | 1440 | 13 | 1500 | 16 |
| 4/19 | 7700 | | | | 0700 | 17 | 0725 | 20 |

Table 29.5.

**Champion**
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH APRIL 19 84

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 4/19 | | | | | 1400 | 20 | 1420 | 21 |
| 4/20 | 9430 | | 9.8 | 9.6 | 0445 | 19 | 0523 | 23 |
| | | | | | 0930 | 21 | 0955 | 23 |
| 4/21 | 10300 | | | | 0600 | 25 | 0630 | 27 |
| | | | | | 1230 | 27 | 0255 | 29 |
| 4/22 | 9640 | | 10.3 | 10.0 | 0450 | 25 | 0520 | 29 |
| | | | | | 0852 | 24 | 0910 | 28 |
| 4/23 | 9330 | | | | 0805 | 23 | 0825 | 27 |
| | | | | | 1335 | 21 | 1400 | 25 |
| 4/24 | 9600 | | | | 1010 | 21 | 1030 | 23 |
| | | | | | 1415 | 19 | 1435 | 22 |
| | | | | | 2115 | 19 | 2135 | 24 |
| 4/25 | 8960 | 46.0 | | | 0830 | 17 | 0850 | 21 |
| | | | | | 1445 | 19 | 1510 | 24 |
| 4/26 | 8280 | | | | 0742 | 20 | 0805 | 24 |
| | | | | | 1308 | 17 | 1331 | 23 |
| 4/27 | 7520 | | | | 0756 | 14 | 0821 | 19 |
| | | | | | 1335 | 15 | 1400 | 20 |
| 4/28 | 7020 | | | | 0615 | 16 | 0720 | 21 |
| | | | | | 1105 | 16 | 1130 | 22 |
| 4/29 | 6630 | | 10.6 | 10.4 | 0545 | 16 | 0610 | 22 |
| | | | | | 1120 | 15 | 1145 | 20 |
| 4/30 | 6270 | | | | 0750 | 12 | 0820 | 16 |
| | | | | | 1415 | 11 | 1445 | 18 |

COMMENTS:

Table 29.5.

CHAMPION
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

Month March 1984

| | | TEMP. | D.O. (mg/l) | | | | COLOR (SCU) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Flow | Harper's | Harper's | | Six-Mile | | Harper's | | Six-Mile | |
| ay | (cfs) | °F | Avg. | Max. | Avg. | Max. | Avg. | Max. | Avg. | Max. |
| 1 | 2370 | | | | | | | | | |
| 2 | 2400 | | | | | | | | | |
| 3 | 2490 | | | | | | | | | |
| 4 | 2500 | | | | | | | | | |
| 5 | 2440 | | | | | | | | | |
| 6 | 2350 | | | | | | | | | |
| 7 | 2320 | 37.9 | | * | | * | | 8 | | 13 |
| 8 | 2370 | | | | | | | | | |
| 9 | 2490 | | | | | | | | | |
| 10 | 2660 | | | | | | | | | |
| 11 | 2740 | | | | | | | | | |
| 12 | 2840 | | | | | | | | | |
| 13 | 2870 | | | | | | | | | |
| 14 | 2980 | 41.7 | | | | | | | | |
| 15 | 3390 | | | | | | | | | |
| 16 | 3520 | | | | | | | | | |
| 17 | 3330 | | | | | | | | | |
| 18 | 3330 | | | | | | | | | |
| 19 | 3170 | | | | | | | | | |
| 20 | 3150 | | | | | | | | | |
| 21 | 3290 | 45.0 | | | | | | | | |
| 22 | 3710 | | | | | | | | | |
| 23 | 3680 | | | | | | | | | |
| 4 | 3590 | | | | | | | | | |
| 5 | 3650 | | | | | | | | | |
| 6 | 3630 | | | | | | | | | |
| 7 | 3610 | | | | | | | | | |
| 8 | 3540 | 40.8 | | | | | | 8 | | 9 |
| 9 | 3540 | | | | | | | | | |
| 0 | | | | | | | | | | |
| 1 | 3330 | | | | | | | | | |



OMMENTS: * The D.O. test results were inadvertently discarded before being recorded. This missing data was not discovered until April.

Table 29.5.

CHAMPION
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

Month February 19 84

| Day | Flow (cfs) | TEMP. Harper's °F | D.O. (mg/l) Harper's Avg. | D.O. (mg/l) Harper's Max. | D.O. (mg/l) Six-Mile Avg. | D.O. (mg/l) Six-Mile Max. | COLOR (SCU) Harper's Avg. | COLOR (SCU) Harper's Max. | COLOR (SCU) Six-Mile Avg. | COLOR (SCU) Six-Mile Max. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3100 | 32.8 | | | | | | | | |
| 2 | 3010 | | | | | | | 11 | | 14 |
| 3 | 2820 | | | | | | | | | |
| 4 | 2840 | | | | | | | | | |
| 5 | 2820 | | | | | | | | | |
| 6 | 2740 | | | | | | | | | |
| 7 | 2740 | | | | | | | | | |
| 8 | 2730 | 34.9 | | | | | | | | |
| 9 | 2640 | | | | | | | | | |
| 10 | 2440 | | | | | | | | | |
| 11 | 2760 | | | | | | | | | |
| 12 | 2640 | | | | | | | | | |
| 13 | 2640 | | | | | | | | | |
| 14 | 2730 | | | | | | | | | |
| 15 | 3100 | 35.6 | | 11.5 | | 11.8 | | 7 | | 10 |
| 16 | 2740 | | | | | | | | | |
| 17 | 2780 | | | | | | | | | |
| 18 | 2660 | | | | | | | | | |
| 19 | 2550 | | | | | | | | | |
| 20 | 2500 | | | | | | | | | |
| 21 | 2500 | | | | | | | | | |
| 22 | 2580 | 36.4 | | | | | | | | |
| 23 | 2500 | | | | | | | | | |
| 24 | 2430 | | | | | | | | | |
| 25 | 2410 | | | | | | | | | |
| 26 | 2410 | | | | | | | | | |
| 27 | 2350 | | | | | | | | | |
| 28 | 2320 | | | | | | | | | |
| 29 | 2350 | 37.8 | | | | | | 5 | | 9 |
| 30 | | | | | | | | | | |
| 31 | | | | | | | | | | |

COMMENTS:

Table 29.5.

CHAMPION
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

Month January 19 84

| Day | Flow (cfs) | TEMP. Harper's °F | D.O. (mg/l) Harper's Avg. | Max. | Six-Mile Avg. | Max. | COLOR (SCU) Harper's Avg. | Max. | Six-Mile Avg. | Max. |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2380 | | | | | | | | | |
| 2 | 2290 | | | | | | | | | |
| 3 | 2450 | | | | | | | | | |
| 4 | 2680 | 32.0 | | | | | | | | |
| 5 | 4090 | | | | | | | | | |
| 6 | 4790 | | | | | | | | | |
| 7 | 8280 | | | | | | | | | |
| 8 | 7080 | | | | | | | | | |
| 9 | 5630 | | | | | | | | | |
| 10 | 4770 | | | | | | | | | |
| 11 | 4330 | 32.8 | | 11.9 | | 11.8 | | 13 | | 16 |
| 12 | 4110 | | | | | | | | | |
| 13 | 3870 | | | | | | | | | |
| 14 | 3100 | | | | | | | | | |
| 15 | 2530 | | | | | | | | | |
| 16 | 2190 | | | | | | | | | |
| 17 | 2230 | | | | | | | | | |
| 18 | 1950 | 32.0 | | | | | | | | |
| 19 | 1740 | | | | | | | | | |
| 20 | 1750 | | | | | | | | | |
| 21 | 1790 | | | | | | | | | |
| 22 | 2310 | | | | | | | | | |
| 23 | 2790 | | | | | | | 6 | | 10 |
| 24 | 2980 | | | | | | | | | |
| 25 | 3850 | 33.8 | | | | | | | | |
| 26 | 3850 | | | | | | | | | |
| 27 | 3870 | | | | | | | | | |
| 28 | 4030 | | | | | | | | | |
| 29 | 3850 | | | | | | | | | |
| 30 | 3570 | | | | | | | | | |
| 31 | 3240 | | | | | | | | | |

COMMENTS:

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

MONTH September 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLO |
|---|---|---|---|---|---|---|---|---|
| 9-1-85 | 1709 | | | | 6:50 | 6 | 7:20 | 9 |
| 9-2 | 1696 | | | | 6:50 | 6 | 7:20 | 9 |
| 9-3 | 1696 | | | | 6:55 | 6 | 7:20 | 9 |
| 9-4 | 1696 | 60.8 | 7.6 | 7.1 | 6:00 | 6 | 6:25 | 9 |
| 9-5 | 1683 | | | | 7:00 | 6 | 7:25 | 9 |
| 9-6 | 1813 | | 7.2 | 7.6 | 6:05 | 5 | 6:30 | 8 |
| 9-7 | 2496 | | | | 6:30 | 6 | 6:50 | 8 |
| | | | | | 12:50 | 7 | 13:15 | 10 |
| 9-8 | 2659 | | 8.4 | 8.6 | 6:20 | 9 | 6:50 | 13 |
| | | | | | 10:40 | 8 | 11:20 | 13 |
| 9-9 | 3145 | | | | 8:45 | 9 | 9:15 | 11 |
| | | | | | 15:40 | 10 | 16:05 | 13 |
| 9-10 | 3200 | | 8.4 | 8.4 | 6:15 | 10 | 6:45 | 14 |
| | | | | | 11:00 | 9 | 11:20 | 14 |
| 9-11 | 3387 | 58.5 | | | 7:00 | 9 | 7:20 | 12 |
| | | | | | 12:55 | 8 | 13:20 | 11 |
| 9-12 | 3700 | | 7.8 | 7.9 | 6:10 | 8 | 6:35 | 12 |
| | | | | | 10:15 | 8 | 10:45 | 12 |
| 9-13 | 5130 | | | | 7:00 | 14 | 7:25 | 17 |
| | | | | | 12:55 | 13 | 13:20 | 17 |
| 9-14 | 5154 | | 8.5 | 8.5 | 6:40 | 14 | 7:05 | 18 |
| | | | | | 12:10 | 13 | 12:35 | 17 |
| 9-15 | 4736 | | | | 7:30 | 11 | 7:55 | 15 |
| | | | | | 11:05 | 11 | 11:30 | 15 |
| 9-16 | 4783 | | 8.6 | 8.5 | 6:15 | 10 | 6:40 | 14 |
| | | | | | 10:20 | 10 | 10:45 | 14 |
| 9-17 | 4667 | | | | 6:55 | 10 | 7:20 | 15 |
| | | | | | 10:50 | 11 | 11:20 | 15 |
| 9-18 | 4598 | 50.9 | 9.0 | 9.0 | 6:15 | 9 | 6:40 | 12 |
| | | | | | 10:15 | 9 | 10:40 | 12 |
| 9-19 | 4621 | | | | 7:40 | 8 | 8:05 | 13 |
| | | | | | 13:00 | 8 | 13:20 | 12 |

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH September 1985

| ATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 20 | 4463 | | 9.3 | 9.4 | 6:20 | 7 | 6:50 | 11 |
| | | | | | 11:00 | 7 | 11:20 | 11 |
| 21 | 4221 | | 8.8 | 9.1 | 6:55 | 7 | 7:20 | 11 |
| | | | | | 12:05 | 7 | 12:30 | 11 |
| 22 | 4178 | | | | 5:00 | 6 | 5:45 | 12 |
| | | | | | 21:00 | 7 | 21:30 | 11 |
| 23 | 4071 | | 9.2 | 9.1 | 6:30 | 7 | 7:00 | 12 |
| | | | | | 14:35 | 6 | 15:15 | 10 |
| 24 | 4071 | | | | 7:25 | 6 | 8:10 | 9 |
| | | | | | 13:05 | 5 | 13:30 | 8 |
| 25 | 3945 | 50.0 | 9.1 | 9.2 | 6:40 | 6 | 7:00 | 9 |
| | | | | | 13:40 | 7 | 14:10 | 12 |
| 26 | 3740 | | | | 7:40 | 6 | 8:15 | 11 |
| | | | | | 14:20 | 6 | 14:40 | 11 |
| 27 | 3680 | | 8.8 | 8.8 | 6:45 | 6 | 7:15 | 10 |
| | | | | | 13:05 | 5 | 13:25 | 9 |
| 28 | 3561 | | | | 6:50 | 5 | 7:30 | 9 |
| | | | | | 11:18 | 5 | 11:37 | 10 |
| 29 | 3445 | | 10.0 | 9.9 | 6:30 | 5 | 7:11 | 9 |
| | | | | | 11:11 | 5 | 11:33 | 9 |
| 30 | 3406 | | | | 9:00 | 5 | 9:25 | 9 |
| | | | | | 11:10 | 5 | 11:35 | 9 |

MMENTS:

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER NUTRIENT DATA

MONTH September 19 85

| DAY | TOTAL KJELDAHL NITROGEN (mg/l) | | TOTAL PHOSPHORUS (mg/l) | | NITRATE (mg/l) | | NITRITE (mg/l) | |
|---|---|---|---|---|---|---|---|---|
| | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE |
| 1 | | | | | | | | |
| 2 | N.D. | 0.82 | 0.13 | 0.11 | 0.07 | 0.04 | < 0.01 | < 0.01 |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | 0.34 | 0.41 | | | 0.08 | 0.08 | < 0.01 | < 0.01 |
| 10 | | | 0.04 | 0.12 | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | 0.35 | 0.46 | N.D. | 0.02 | 0.09 | 0.08 | < 0.01 | < 0.01 |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | 0.33 | 0.34 | 0.05 | 0.10 | 0.07 | 0.06 | < 0.01 | < 0.01 |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |

COMMENTS:

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA

MONTH August 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 8-1 | 1310 | | | | 7:00 | 6 | 7:25 | 10 |
| 8-2 | 1118 | | | | 7:05 | 6 | 7:30 | 10 |
| 8-3 | 1524 | | | | 7:00 | 7 | 7:25 | 10 |
| 8-4 | 1893 | | | | 7:00 | 8 | 7:25 | 10 |
| 8-5 | 1975 | | | | 7:05 | 10 | 7:25 | 11 |
| 8-6 | 1989 | | 6.8 | 7.2 | 5:20 | 10 | 5:45 | 12 |
| 8-7 | 1975 | 63.9 | | | 7:05 | 8 | 7:30 | 11 |
| 8-8 | 1893 | | 6.7 | 7.2 | 7:05 | 8 | 7:30 | 11 |
| 8-9 | 1893 | | | | 8:50 | 7 | 9:15 | 10 |
| 8-10 | 1826 | | | | 7:35 | 6 | 8:00 | 9 |
| 8-11 | 2017 | | 8.8* | 8.0 | 6:25 | 6 | 6:55 | 9 |
| | | | | | 13:30 | 6 | 14:00 | 8 |
| 8-12 | 2249 | | 7.9 | 8.3 | 5:45 | 7 | 6:10 | 10 |
| | | | | | 13:30 | 7 | 14:00 | 10 |
| 8-13 | 2609 | | | | 7:50 | 7 | 8:10 | 10 |
| | | | | | 14:30 | 7 | 15:15 | 11 |
| 8-14 | 2708 | 59.8 | 7.8 | 8.1 | 5:30 | 9 | 6:00 | 13 |
| | | | | | 10:00 | 8 | 10:25 | 12 |
| 8-15 | 2642 | | | | 7:25 | 8 | 7:50 | 12 |
| | | | | | 14:15 | 7 | 14:50 | 11 |
| 8-16 | 2544 | | 7.6 | 8.0 | 5:45 | 8 | 6:15 | 12 |
| | | | | | 10:20 | 7 | 10:40 | 11 |
| 8-17 | 2528 | | | | 5:40 | 8 | 6:05 | 12 |
| | | | | | 9:35 | 7 | 10:00 | 11 |
| 8-18 | 2449 | | 7.4 | 7.6 | 5:45 | 6 | 6:15 | 11 |
| | | | | | 9:40 | 6 | 10:05 | 11 |
| 8-19 | 2371 | | | | 7:00 | 5 | 7:25 | 9 |
| | | | | | 11:00 | 5 | 11:25 | 9 |
| 8-20 | 2340 | | 7.0 | 7.2 | 5:40 | 5 | 6:05 | 8 |
| | | | | | 9:40 | 5 | 10:05 | 8 |
| 8-21 | 2544 | 58.9 | | | 7:05 | 6 | 7:30 | 9 |
| | | | | | 11:05 | 5 | 11:30 | 9 |



* Air bubbles in bottle, inaccurate results

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

# CLARK FORK RIVER DATA (CONT.)

MONTH August 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 8-22 | 2544 | | 7.6 | 7.8 | 5:45 | 5 | 6:10 | 9 |
| | | | | | 9:4[illegible] | 5 | 10:10 | [illegible] |
| 8-23 | 2449 | | | | 6:55 | 6 | 7:20 | 1[illegible] |
| | | | | | 1[illegible]:[illegible]5 | 6 | 11:20 | 10 |
| 8-24 | 235[illegible] | | 7.2 | 7.5 | 5:45 | 4 | 6:15 | 9 |
| | | | | | 11:30 | 5 | 11:55 | 9 |
| 8-25 | 2234 | | | | 6:40 | 6 | 7:00 | 10 |
| | | | | | 12:00 | 5 | 12:30 | 9 |
| 8-26 | 2190 | | 6.8 | 7.2 | 5:50 | 5 | 6:15 | 10 |
| 8-27 | 2102 | | | | 6:[illegible]5 | 5 | 7:20 | 8 |
| 8-28 | 2074 | 63.3 | | | 7:00 | 4 | 7:25 | 6 |
| 8-29 | 1947 | | | | 7:10 | 5 | 7:35 | 8 |
| 8-30 | 1799 | | 6.5 | 7.2 | 5:55 | 6 | 6:20 | 9 |
| 8-31 | 1773 | | | | 6:55 | 5 | 7:20 | 8 |

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER NUTRIENT DATA

MONTH August 19 85

| DAY | TOTAL KJELDAHL NITROGEN (mg/l) | | TOTAL PHOSPHORUS (mg/l) | | NITRATE (mg/l) | | NITRITE (mg/l) | |
|---|---|---|---|---|---|---|---|---|
| | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | 0.43 | 0.45 | 0.90 | 0.60 | 0.12 | 0.09 | < 0.01 | < 0.01 |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | 0.40 | 0.44 | .08 | 0.09 | 0.09 | 0.09 | < 0.01 | < 0.01 |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | 0.18 | 0.18 | 0.14 | 0.14 | 0.09 | 0.08 | < 0.01 | < 0.01 |
| 21 | | | | | | | | |
| 22 | | | | | | | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | 0.36 | 0.36 | 0.19 | 0.20 | 0.12 | 0.09 | < 0.01 | < 0.01 |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | | | | | | | | |
| 30 | | | | | | | | |
| 31 | | | | | | | | |

COMMENTS:

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

MONTH July 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 7-1-85 | 3274 | | 7.2 | 7.2 | 4:40 | 7 | 5:10 | 11 |
| | | | | | 8:45 | 8 | 9:10 | 11 |
| 7-2-85 | 3109 | | | | 6:40 | 6 | 7:05 | 11 |
| | | | | | 12:40 | 6 | 13:05 | 10 |
| 7-3-85 | 2948 | 67.8 | 6.9 | 7.0 | 4:50 | 7 | 5:15 | 10 |
| 7-4-85 | 2759 | | | | 6:45 | 7 | 7:05 | 9 |
| 7-5-85 | 2642 | | | | 6:45 | 8 | 7:05 | 10 |
| 7-6-85 | 2544 | | | | 6:45 | 8 | 7:05 | 10 |
| 7-7-85 | 2418 | | | | 6:45 | 8 | 7:05 | 10 |
| 7-8-85 | 2340 | | | | 9:30 | 7 | 10:05 | 9 |
| 7-9-85 | 2371 | | 6.7 | 6.8 | 5:10 | 8 | 5:35 | 10 |
| 7-10-85 | 2160 | 66.3 | | | 11:35 | 6 | 12:00 | 9 |
| 7-11-85 | 2102 | | | | 10:00 | 7 | 10:20 | 8 |
| 7-12-85 | 2031 | | | | 9:05 | 7 | 9:35 | 10 |
| 7-13-85 | 1893 | | | | 10:00 | 7 | 10:25 | 10 |
| 7-14-85 | 1879 | | | | 8:45 | 6 | 9:08 | 9 |
| 7-15-85 | 1813 | | | | 7:00 | 2 | 7:25 | 5 |
| 7-16-85 | 1799 | | 6.7 | 7.0 | 4:57 | 8 | 5:25 | 10 |
| 7-17-85 | 1709 | 66.3 | | | 7:00 | 8 | 7:25 | 11 |
| 7-18-85 | 1773 | | | | 7:00 | 7 | 7:25 | 10 |
| 7-19-85 | 1683 | | | | 7:00 | 8 | 7:25 | 10 |
| 7-20-85 | 1646 | | | | 4:00 | 7 | 4:30 | 8 |
| 7-21-85 | 1572 | | | | 13:15 | 8 | 13:45 | 10 |
| 7-22-85 | 1524 | | | | 7:30 | 6 | 7:55 | 9 |
| 7-23-85 | 1476 | | 6.8 | 7.0 | 5:05 | 7 | 5:30 | 10 |
| 7-24-85 | 1442 | 67.2 | | | 7:00 | 7 | 7:25 | 9 |
| 7-25-85 | 1406 | | | | 7:05 | 5 | 7:30 | 8 |
| 7-26-85 | 1394 | | | | 7:05 | 7 | 7:30 | 10 |
| 7-27-85 | 1382 | | | | 8:20 | 5 | 8:40 | 9 |
| 7-28-85 | 1334 | | | | 8:18 | 6 | 8:38 | 9 |
| 7-29-85 | 1334 | | | | 7:00 | 6 | 7:25 | 10 |
| 7-30-85 | 1358 | | 6.6 | 7.0 | 5:15 | 6 | 5:45 | 9 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH July 1985

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) | | COLOR (SCU) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | HARPER'S | | SIX-MILE | |
| | | | HARPER'S | SIX-MILE | TIME | COLOR | TIME | COLOR |
| 7-31-85 | 1334 | 64.0 | | | 7:00 | 7 | 7:25 | 10 |

Table 29.5.

**Champion**
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER NUTRIENT DATA

MONTH July 1985

| DAY | TOTAL KJELDAHL NITROGEN (mg/l) | | TOTAL PHOSPHORUS (mg/l) | | NITRATE (mg/l) | | NITRITE (mg/l) | |
|---|---|---|---|---|---|---|---|---|
| | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE | HARPER'S | SIX-MILE |
| 1 | 0.52 | 0.48 | N.D. | N.D. | 0.08 | 0.07 | < 0.01 | < 0.01 |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | 1.09 | 0.59 | N.D. | 0.05 | 0.08 | 0.06 | < 0.01 | < 0.01 |
| 9 | | | | | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | 0.40 | 0.39 | 0.07 | 0.05 | 0.10 | 0.10 | < 0.01 | < 0.01 |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | | | | | |
| 22 | 0.38 | 0.30 | 0.10 | 0.09 | 0.13 | 0.09 | < 0.01 | < 0.01 |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |
| 29 | 0.38 | 0.31 | 0.16 | 0.08 | 0.16 | 0.05 | < 0.01 | < 0.01 |
| 30 | | | | | | | | |
| 31 | | | | | | | | |

COMMENTS:

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA

MONTH June 1985

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| /1 | 13270 | | | | 6:45 | 15 | 7:05 | 19 |
| | | | | | 12:40 | 15 | 13:00 | 20 |
| /2 | 12290 | | | | 6:30 | 13 | 6:40 | 19 |
| | | | | | 12:10 | 14 | 12:30 | 20 |
| /3 | 13310 | | | | 6:55 | 13 | 7:20 | 18 |
| | | | | | 10:55 | 15 | 11:20 | 19 |
| /4 | 11980 | | | | 6:50 | 14 | 7:15 | 19 |
| | | | | | 10:50 | 10 | 11:15 | 15 |
| /5 | 11460 | 51.8 | | | 6:50 | 13 | 7:20 | 16 |
| | | | | | 12:55 | 13 | 13:20 | 18 |
| /6 | 11830 | | | | 7:00 | 12 | 7:35 | 16 |
| | | | | | 11:00 | 11 | 11:25 | 15 |
| /7 | 13230 | | 9.3 | 9.3 | 4:40 | 12 | 5:05 | 16 |
| | | | | | 8:40 | 11 | 9:05 | 16 |
| /8 | 15970 | | | | 6:30 | 9 | 6:55 | 12 |
| | | | | | 11:00 | 16 | 11:25 | 20 |
| /9 | 16200 | | 9.2 | 9.1 | 4:40 | 17 | 5:05 | 22 |
| | | | | | 10:44 | 16 | 11:05 | 21 |
| /10 | 13350 | | | | 6:45 | 13 | 7:10 | 17 |
| | | | | | 10:45 | 12 | 11:10 | 17 |
| /11 | 11380 | | 8.7 | 8.9 | 4:40 | 11 | 5:05 | 15 |
| | | | | | 8:45 | 10 | 9:10 | 15 |
| /12 | 11020 | 54.2 | | | 6:55 | 11 | 7:20 | 14 |
| | | | | | 12:35 | 11 | 13:00 | 14 |
| /13 | 13430 | | 8.4 | 8.5 | 5:00 | 10 | 5:25 | 13 |
| | | | | | 9:05 | 10 | 9:25 | 14 |
| /14 | 9564 | | | | 7:40 | 8 | 8:05 | 12 |
| | | | | | 14:30 | 9 | 14:50 | 13 |
| /15 | 9008 | | 8.4 | 8.6 | 5:30 | 10 | 6:00 | 13 |
| | | | | | 11:30 | 9 | 12:00 | 13 |
| /16 | 8658 | | | | 7:10 | 10 | 7:30 | 13 |
| | | | | | | | | |

Table 29.5.

**Champion**
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (Continued)

MONTH June 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 6/16 | | | | | 14:10 | 10 | 14:30 | 13 |
| 6/17 | 8255 | | 8.3 | 8.4 | 4:40 | 9 | 5:05 | 10 |
| | | | | | 9:10 | 8 | 9:35 | 9 |
| 6/18 | 75[illegible]8 | | | | 6:40 | 9 | 7:05 | 9 |
| | | | | | 10:40 | 8 | 11:05 | 9 |
| 6/19 | 7138 | 56.5 | 8.0 | 7.9 | 4:40 | 9 | 5:05 | 11 |
| | | | | | 8:40 | 9 | 9:05 | 12 |
| 6/20 | 6695 | | | | 6:45 | 3 | 7:10 | 5 |
| | | | | | 10:45 | 2 | 11:10 | 5 |
| 6/21 | 6400 | | 7.7 | 7.8 | 4:40 | 3 | 5:05 | 6 |
| | | | | | 8:40 | 3 | 9:05 | 5 |
| 6/22 | 5934 | | | | 7:10 | 7 | 7:30 | 10 |
| | | | | | 11:10 | 8 | 11:35 | 10 |
| 6/23 | 5415 | | 7.8 | 7.8 | 5:10 | 8 | 5:30 | 11 |
| | | | | | 9:45 | 7 | 10:05 | 11 |
| 6/24 | 5084 | | | | 6:50 | 8 | 7:15 | 12 |
| | | | | | 12:50 | 7 | 13:15 | 12 |
| 6/25 | 4690 | | 8.0 | 8.0 | 4:42 | 7 | 5:07 | 10 |
| | | | | | 8:45 | 7 | 9:10 | 11 |
| 6/26 | 4156 | 58.6 | | | 6:50 | 1 | 7:15 | 4 |
| | | | | | 13:05 | 7 | 13:30 | 10 |
| 6/27 | 3903 | | 8.0 | 8.1 | 4:45 | 7 | 5:10 | 11 |
| | | | | | 8:45 | 6 | 9:10 | 10 |
| 6/28 | 3760 | | | | 6:45 | 6 | 7:10 | 11 |
| | | | | | 12:35 | 7 | 13:00 | 11 |
| 6/29 | 3541 | | 7.4 | 7.4 | 4:45 | 6 | 5:18 | 10 |
| | | | | | 9:45 | 7 | 10:05 | 11 |
| 6/30 | 3425 | | | | 6:23 | 7 | 6:46 | 11 |
| | | | | | 11:59 | 7 | 12:24 | 10 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA

MONTH May 19 85

| ATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 5/1 | 6943 | 53.2 | 8.8 | 8.8 | 5:15 | 12 | 5:45 | 16 |
| | | | | | 9:15 | 13 | 9:40 | 17 |
| 5/2 | 8721 | | | | 6:55 | 13 | 7:20 | 17 |
| | | | | | 13:15 | 15 | 13:45 | 20 |
| 5/3 | 11720 | | 9.0 | 8.7 | 5:20 | 16 | 5:45 | 19 |
| | | | | | 9:20 | 17 | 9:45 | 21 |
| 5/4 | 15010 | | | | 7:10 | 20 | 7:30 | 23 |
| | | | | | 13:05 | 21 | 13:25 | 25 |
| 5/5 | 15800 | | 10.0 | 10.0 | 5:25 | 20 | 5:55 | 24 |
| | | | | | 10:00 | 21 | 10:20 | 26 |
| 5/6 | 13350 | | | | 7:00 | 17 | 7:25 | 22 |
| | | | | | 11:00 | 17 | 11:25 | 22 |
| 5/7 | 11720 | | | | 6:55 | 15 | 7:20 | 20 |
| | | | | | 12:50 | 14 | 13:15 | 18 |
| 5/8 | 11350 | 44.7 | | | 6:50 | 15 | 7:15 | 19 |
| | | | | | 10:55 | 15 | 11:20 | 19 |
| 5/9 | 12090 | | | | 7:30 | 14 | 7:55 | 18 |
| | | | | | 12:48 | 15 | 13:15 | 20 |
| 5/10 | 12130 | | | | 7:45 | 14 | 8:10 | 19 |
| | | | | | 12:15 | 14 | 12:40 | 19 |
| 5/11 | 11350 | | | | 6:40 | 14 | 7:05 | 18 |
| | | | | | 10:55 | 14 | 11:25 | 19 |
| 5/12 | 10590 | | 10.0 | 10.0 | 5:20 | 12 | 5:55 | 16 |
| | | | | | 10:20 | 11 | 10:45 | 16 |
| 5/13 | 11350 | | | | 7:00 | 11 | 7:25 | 16 |
| | | | | | 11:00 | 11 | 11:25 | 16 |
| 5/14 | 9040 | | | | 7:00 | 11 | 7:15 | 16 |
| | | | | | 11:00 | 12 | 11:25 | 16 |
| 5/15 | 8721 | 50.2 | | | 6:50 | 10 | 7:15 | 14 |
| | | | | | 10:50 | 10 | 11:15 | 14 |
| 5/16 | 8502 | | | | 6:55 | 11 | 7:20 | 16 |
| | | | | | 10:55 | 11 | 11:20 | 15 |

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH May 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 5/17 | 9366 | | 8.8 | 8.8 | 5:00 | 12 | 5:25 | 16 |
| | | | | | 9:00 | 12 | 9:25 | 16 |
| 5/18 | 10590 | | | | 5:25 | 13 | 5:45 | 18 |
| | | | | | 9:40 | 14 | 10:00 | 18 |
| 5/19 | 11750 | | 8.5 | 8.5 | 5:25 | 13 | 5:45 | 18 |
| | | | | | 9:25 | 14 | 9:50 | 18 |
| 5/20 | 13670 | | | | 6:55 | 16 | 7:20 | 21 |
| | | | | | 10:55 | 15 | 11:20 | 19 |
| 5/21 | 14710 | | 9.2 | 9.2 | 4:50 | 16 | 5:15 | 21 |
| | | | | | 9:30 | 17 | 9:55 | 21 |
| 5/22 | 16240 | 45.4 | | | 7:00 | 18 | 7:25 | 23 |
| | | | | | 11:00 | 18 | 11:25 | 22 |
| 5/23 | 16880 | | 9.0 | 9.0 | 4:50 | 17 | 5:15 | 21 |
| | | | | | 10:30 | 16 | 10:45 | 21 |
| 5/24 | 18340 | | | | 6:50 | 17 | 7:15 | 22 |
| | | | | | 10:55 | 17 | 11:20 | 21 |
| 5/25 | 19620 | | 9.2 | 8.9 | 6:15 | 20 | 6:45 | 25 |
| | | | | | 11:30 | 19 | 12:15 | 24 |
| 5/26 | 20270 | | | | 7:00 | 22 | 7:30 | 26 |
| | | | | | 13:40 | 20 | 14:15 | 25 |
| 5/27 | 18190 | | 9.0 | 9.0 | 6:15 | 18 | 6:40 | 24 |
| | | | | | 13:00 | 18 | 13:15 | 23 |
| 5/28 | 16020 | | | | 6:55 | 16 | 7:20 | 21 |
| | | | | | 10:55 | 16 | 11:20 | 22 |
| 5/29 | 15310 | 52.6 | 9.0 | 9.1 | 4:50 | 14 | 5:10 | 19 |
| | | | | | 9:45 | 14 | 10:10 | 19 |
| 5/30 | 15270 | | | | 6:55 | 14 | 7:20 | 17 |
| | | | | | 10:55 | 14 | 11:20 | 18 |
| 5/31 | 14710 | | 10.0 | 10.0 | 4:45 | 16 | 5:10 | 20 |
| | | | | | 9:00 | 16 | 9:25 | 20 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA

MONTH APRIL 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 2465 | | | | 7:00 | 6 | 7:25 | 10 |
| | | | | | 11:00 | 6 | 11:30 | 10 |
| 2 | 2690 | | | | 7:00 | 6 | 7:25 | 10 |
| | | | | | 11:00 | 7 | 11:25 | 11 |
| 3 | 3445 | 48.0 | | | 7:00 | 10 | 7:25 | 11 |
| | | | | | 13:35 | 12 | 14:15 | 14 |
| 4 | 4156 | | 10.0 | 9.8 | 5:10 | 17 | 5:40 | 21 |
| | | | | | 9:30 | 17 | 10:00 | 21 |
| 5 | 3821 | | | | 5:50 | 20 | 6:18 | 24 |
| | | | | | 11:15 | 19 | 11:35 | 24 |
| 6 | 3561 | | 10.0 | 9.9 | 5:25 | 15 | 5:55 | 19 |
| | | | | | 9:50 | 14 | 10:20 | 19 |
| 7 | 3541 | | | | 5:45 | 12 | 6:10 | 16 |
| | | | | | 9:50 | 11 | 10:15 | 16 |
| 8 | 3541 | | 9.8 | 9.7 | 4:45 | 11 | 5:15 | 15 |
| | | | | | 9:10 | 11 | 9:45 | 15 |
| 9 | 3561 | | | | 6:50 | 10 | 7:20 | 15 |
| | | | | | 10:50 | 10 | 11:20 | 15 |
| 10 | 3987 | 49.6 | 9.5 | 9.5 | 5:55 | 10 | 6:20 | 14 |
| | | | | | 9:00 | 10 | 9:30 | 14 |
| 1 | 4783 | | | | 7:00 | 13 | 7:30 | 17 |
| | | | | | 11:00 | 13 | 11:25 | 17 |
| 2 | 6036 | | 9.7 | 9.4 | 4:55 | 16 | 5:25 | 18 |
| | | | | | 9:00 | 17 | 9:25 | 19 |
| 3 | 6454 | | | | 7:10 | 17 | 7:30 | 21 |
| | | | | | 11:15 | 18 | 11:35 | 22 |
| 4 | 7026 | | 9.5 | 9.5 | 5:00 | 18 | 5:30 | 22 |
| | | | | | 10:20 | 18 | 10:40 | 22 |
| 5 | 8103 | | | | 7:00 | 18 | 7:30 | 21 |
| | | | | | 11:50 | 19 | 12:50 | 22 |
| 6 | 9564 | | 9.7 | 9.6 | 4:50 | 18 | 5:20 | 23 |
| | | | | | 8:50 | 18 | 9:30 | 22 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH APRIL 1985

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 17 | 10350 | 51.1 | | | 6:[illegible]0 | 20 | 7:20 | [illegible] |
| | | | | | 10:50 | 21 | 11:20 | 5 |
| 18 | 10840 | | 9.7 | 9.7 | 4:45 | 18 | 5:10 | [illegible] |
| | | | | | 9:00 | 18 | 9:25 | 23 |
| 19 | 11200 | | | | 6:45 | 18 | 7:10 | 22 |
| | | | | | 10:45 | 18 | 11:10 | 23 |
| 20 | 10630 | | 10.4 | 10.5 | 5:15 | 17 | 5:40 | 22 |
| | | | | | 11:05 | 17 | 11:30 | 22 |
| 21 | 9300 | | | | 7:[illegible]5 | 16 | 8:05 | 20 |
| | | | | | 11:25 | 16 | 11:47 | 19 |
| 22 | 8316 | | 10.6 | 10.5 | 4:40 | 14 | 5:10 | 18 |
| | | | | | 9:00 | 14 | 9:25 | 18 |
| 23 | 7539 | | | | 6:55 | 12 | 7:20 | 17 |
| | | | | | 10:55 | 12 | 11:20 | 17 |
| 24 | 7138 | 41.1 | | | 6:55 | 11 | 7:20 | 16 |
| | | | | | 10:55 | 12 | 11:20 | 16 |
| 25 | 6587 | | | | 6:55 | 12 | 7:20 | 16 |
| | | | | | 11:10 | 12 | 11:40 | 18 |
| 26 | 5934 | | | | 6:55 | 11 | 7:30 | 15 |
| | | | | | 10:55 | 10 | 11:20 | 15 |
| 27 | 5536 | | | | 7:06 | 10 | 7:27 | 14 |
| | | | | | 11:10 | 10 | 11:30 | 16 |
| 28 | 5463 | | | | 7:05 | 10 | 7:25 | 14 |
| | | | | | 11:05 | 9 | 11:25 | 14 |
| 29 | 5463 | | 9:2 | 9.3 | 5:25 | 10 | 5:55 | 14 |
| | | | | | 9:25 | 10 | 9:55 | 15 |
| 30 | 6139 | | | | 6:55 | 11 | 7:20 | 14 |
| | | | | | 11:00 | 11 | 11:20 | 15 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA

MONTH MARCH 1985

| ATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 2234 | | 11.3 | 11.4 | 6:45 | 8 | 7:15 | 11 |
| | | | | | 10:45 | 7 | 11:15 | 11 |
| 2 | 2418 | | | | 5:00 | 9 | 5:30 | 12 |
| | | | | | 9:15 | 9 | 9:45 | 13 |
| 3 | 2294 | | | | 6:30 | 12 | 7:00 | 15 |
| | | | | | 11:15 | 11 | 11:45 | 13 |
| 4 | 2059 | | | | 7:05 | 12 | 7:35 | 17 |
| | | | | | 13:00 | 12 | 13:30 | 17 |
| 5 | 1947 | | | | 7:05 | 8 | 7:35 | 14 |
| | | | | | 12:55 | 5 | 13:25 | 9 |
| 6 | 2031 | 38.9 | | | 7:10 | 6 | 7:40 | 11 |
| | | | | | 11:00 | 7 | 11:30 | 11 |
| 7 | 1975 | | | | 7:10 | 5 | 7:40 | 10 |
| | | | | | 11:00 | 4 | 11:30 | 8 |
| 8 | 1989 | | 11.5 | 11.4 | 6:15 | 4 | 6:45 | 8 |
| | | | | | 10:15 | 4 | 10:45 | 9 |
| 9 | 1920 | | | | 6:25 | 4 | 6:45 | 8 |
| | | | | | 10:55 | 4 | 11:20 | 7 |
| 0 | 1975 | | | | 6:25 | 4 | 6:55 | 9 |
| | | | | | 10:40 | 4 | 11:00 | 8 |
| 1 | 2059 | | | | 6:30 | 2 | 7:00 | 7 |
| | | | | | 11:00 | 5 | 11:20 | 9 |
| 2 | 2059 | | | | 7:00 | 5 | 7:30 | 11 |
| | | | | | 12:45 | 5 | 13:15 | 8 |
| 3 | 2146 | 37.3 | 11.1 | 11.0 | 5:30 | 6 | 6:00 | 10 |
| | | | | | 11:10 | 5 | 11:40 | 9 |
| 4 | 2205 | | | | 8:15 | 7 | 8:40 | 10 |
| | | | | | 13:05 | 6 | 13:35 | 10 |
| 5 | 2294 | | | | 8:35 | 7 | 9:15 | 11 |
| | | | | | 12:35 | 7 | 13:05 | 11 |
| 6 | 2481 | | | | 7:00 | 8 | 7:20 | 12 |
| | | | | | 12:25 | 8 | 13:00 | 12 |

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH MARCH 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) | | COLOR (SCU) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | HARPER'S | SIX-MILE | HARPER'S TIME | HARPER'S COLOR | SIX-MILE TIME | SIX-MILE COLOR |
| 17 | 2496 | | | | 6:40 | 10 | 7:00 | 14 |
| | | | | | 11:30 | 11 | 11:50 | 14 |
| 18 | 2659 | | | | 7:05 | 13 | 7:30 | 16 |
| | | | | | 11:00 | 12 | 11:30 | 16 |
| 19 | 2827 | | | | 6:55 | 14 | 7:25 | 18 |
| | | | | | 11:05 | 15 | 11:30 | 19 |
| 20 | 3001 | 39.0 | | | 7:10 | 16 | 7:40 | 20 |
| | | | | | 11:00 | 17 | 11:25 | 21 |
| 21 | 3163 | | | | 7:00 | 17 | 7:30 | 21 |
| | | | | | 11:00 | 17 | 11:25 | 21 |
| 22 | 3037 | | 10.9 | 10.9 | 5:30 | 18 | 6:00 | 21 |
| | | | | | 9:35 | 16 | 10:00 | 19 |
| 23 | 2879 | | | | 7:15 | 15 | 7:40 | 19 |
| | | | | | 12:00 | 15 | 12:25 | 19 |
| 24 | 2642 | | | | 7:25 | 11 | 7:45 | 17 |
| | | | | | 12:40 | 11 | 13:20 | 17 |
| 25 | 2692 | | | | 7:00 | 9 | 7:30 | 13 |
| | | | | | 11:25 | 10 | 11:40 | 15 |
| 26 | 2659 | | | | 6:55 | 9 | 7:25 | 12 |
| | | | | | 10:55 | 8 | 11:25 | 12 |
| 27 | 2561 | 40.6 | | | 7:05 | 8 | 7:30 | 12 |
| | | | | | 11:00 | 8 | 11:25 | 13 |
| 28 | 2481 | | | | 7:05 | 8 | 7:35 | 13 |
| | | | | | 10:55 | 8 | 11:20 | 12 |
| 29 | 2402 | | 10.7 | 10.6 | 5:40 | 7 | 6:10 | 11 |
| | | | | | 10:00 | 7 | 10:30 | 12 |
| 30 | 2340 | | | | 6:10 | 7 | 6:50 | 11 |
| | | | | | 11:50 | 8 | 12:15 | 13 |
| 31 | 2356 | | | | 6:30 | 7 | 7:10 | 11 |
| | | | | | 11:30 | 6 | 12:00 | 10 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

DIRECT DISCHARGE SUMMARY

MONTH MARCH 19 85

| RIVER | | | DISCHARGE | | | |
|---|---|---|---|---|---|---|
| DATE | TIME | △ COLOR (SCU) | TIME | OUTFALL | FLOW (CFS) | FLOW CHANGED TO (CFS) |
| 1 | 6:45 | 3 | 8:05 | 003 | 0.5 | No Change (NC) |
| | 10:45 | 4 | 13:30 | 003 | 0.6 | NC |
| 2 | 5:00 | 3 | 6:00 | 003 | 0.6 | NC |
| | 9:15 | 4 | 11:00 | 003 | 0.6 | NC |
| 3 | 6:30 | 3 | 9:00 | 003 | 0.6 | 0.8 |
| | 11:15 | 2 | 14:45 | 003 | 0.9 | 1.6 |
| 4 | 7:05 | 5 | 8:05 | 003 | 1.4 | 1.0 |
| | 13:00 | 5 | 14:10 | 003 | 1.0 | NC |
| 5 | 7:05 | 6 | 8:20 | 003 | 1.0 | 0.7 |
| | 12:55 | 4 | 15:35 | 003 | 0.7 | NC |
| 6 | 7:10 | 5 | 8:50 | 003 | 0.7 | NC |
| | 11:00 | 4 | 13:30 | 003 | 0.7 | NC |
| 7 | 7:10 | 5 | 8:15 | 003 | 0.6 | NC |
| | 11:00 | 4 | 14:30 | 003 | 0.6 | 0.5 |
| 8 | 6:15 | 4 | 8:00 | 003 | 0.5 | NC |
| | 11:15 | 5 | 13:30 | 003 | 0.5 | 0.4 |
| 9 | 6:25 | 4 | 8:45 | 003 | 0.4 | NC |
| | 10:55 | 3 | 13:50 | 003 | 0.4 | NC |
| 10 | 6:25 | 5 | 8:45 | 003 | 0.4 | NC |
| | 10:40 | 4 | 13:40 | 003 | 0.4 | NC |
| 11 | 6:30 | 5 | 8:05 | 003 | 0.4 | NC |
| | 11:00 | 4 | 13:25 | 003 | 0.4 | NC |
| 12 | 7:00 | 6 | 8:15 | 003 | 0.4 | 0.4* |
| | 12:45 | 3 | 14:30 | 003 | 0.4 | NC |
| 13 | 5:30 | 4 | 7:35 | 003 | 0.4 | NC |
| | 11:10 | 4 | 14:30 | 003 | 0.4 | NC |
| 14 | 8:15 | 3 | 9:30 | 003 | 0.4 | NC |
| | 13:05 | 4 | 14:30 | 003 | 0.4 | NC |
| 15 | 8:35 | 4 | 10:30 | 003 | 0.4 | NC |
| | 12:35 | 4 | 14:45 | 003 | 0.4 | NC |
| 16 | 7:00 | 4 | 9:30 | 003 | 0.4 | 1.0 |

*Slight cut made.

Table 29.5.

**Champion**
Champion International Corporation
Frenchtown Mill

DIRECT DISCHARGE SUMMARY - CONTINUED

MONTH MARCH 1985

| RIVER | | | DISCHARGE | | | |
|---|---|---|---|---|---|---|
| DATE | TIME | △ COLOR (SCU) | TIME | OUTFALL | FLOW (CFS) | FLOW CHANGED TO (CFS) |
| 16 | 12:35 | 4 | | | | |
| 17 | 6:40 | 4 | 8:10 | 003 | 1.3 | 2.8 |
| | 11:30 | 3 | | | | |
| 18 | 7:05 | 3 | 8:15 | 003 | 2.8 | NC |
| | 11:00 | 4 | 13:30 | 003 | 2.8 | NC |
| 19 | 6:55 | 4 | 8:00 | 003 | 2.7 | NC |
| | 11:05 | 4 | 14:00 | 003 | 2.7 | NC |
| 20 | 7:10 | 4 | 8:40 | 003 | 2.7 | NC |
| | 11:00 | 4 | 13:30 | 003 | 2.7 | NC |
| 21 | 7:00 | 4 | 8:30 | 003 | 2.7 | NC |
| | 11:00 | 4 | 13:30 | 003 | 2.7 | NC |
| 22 | 5:30 | 3 | 7:30 | 003 | 2.8 | NC |
| | 9:35 | 3 | 11:30 | 003 | 2.8 | 3.6 |
| 23 | 7:15 | 4 | 9:12 | 004 | 3.6 | NC |
| | 12:00 | 4 | 13:30 | 003 | 3.6 | NC |
| 24 | 7:25 | 6 | 9:18 | 003 | 3.6 | 3.0 |
| | 12:40 | 6 | 14:10 | 003 | 3.0 | 2.7 |
| 25 | 7:00 | 4 | 8:20 | 003 | 2.7 | NC |
| | 11:25 | 5 | 13:50 | 003 | 2.7 | 2.2 |
| 26 | 6:55 | 3 | 8:00 | 003 | 2.2 | NC |
| | 10:55 | 4 | 13:10 | 003 | 2.2 | NC |
| 27 | 7:05 | 4 | 8:15 | 003 | 2.2 | NC |
| | 11:00 | 5 | 14:00 | 003 | 2.2 | 1.8 |
| 28 | 7:05 | 5 | 8:15 | 003 | 1.8 | NC |
| | 10:55 | 4 | 13:25 | 003 | 1.8 | 1.6 |
| 29 | 5:40 | 4 | 7:30 | 003 | 1.7 | NC |
| | 10:00 | 5 | 12:35 | 003 | 1.7 | 1.3 |
| 30 | 6:10 | 4 | 9:00 | 003 | 1.4 | NC |
| | 11:50 | 5 | 15:45 | 003 | 1.3 | 1.2 |
| 31 | 6:30 | 4 | 10:00 | 003 | 1.2 | NC |
| | 11:30 | 4 | 14:00 | 003 | 1.1 | NC |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

DIRECT DISCHARGE DATA

OUTFALL 003

MONTH MARCH 19 85

| DAY | AVG FLOW (CFS) | BOD (mg/l) | TSS (mg/l) | COLOR (SCU) | TOTAL KJELDAHL NITROGEN (mg/l) | NITRATE (mg/l) | NITRITE (mg/l) | TOTAL PHOSPHORUS (mg/l) | pH |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.5 | 66 | 50 | | | | | | |
| 2 | 0.7 | 73 | 62 | | | | | | |
| 3 | 1.3 | 67 | 62 | | 16.24 | ND | <0.01 | 3.75 | |
| 4 | 1.0 | 69 | 58 | 1390 | | | | | 7.3 |
| 5 | 0.7 | 49 | 56 | | | | | | |
| 6 | 0.7 | 63 | 58 | | | | | | |
| 7 | 0.5 | 57 | 56 | | | | | | |
| 8 | 0.5 | 72 | 62 | | | | | | |
| 9 | 0.5 | 71 | 38 | | | | | | |
| 10 | 0.4 | 80 | 28 | 1550 | 17.78 | ND | <0.01 | 3.81 | 7.4 |
| 11 | 0.3 | 73 | 80 | | | | | | |
| 12 | 0.4 | 74 | 50 | | | | | | |
| 13 | 0.5 | 67 | 44 | | | | | | |
| 14 | 0.4 | 75 | 48 | | | | | | |
| 15 | 0.4 | 42** | 16** | | | | | | |
| 16 | 1.0 | 69 | 76 | | | | | | |
| 17 | 2.8 | 74 | 32 | 1540 | 17.70 | <0.01 | <0.01 | 3.47 | 7.8 |
| 18 | 2.8 | 75 | 52 | | | | | | |
| 19 | 2.8 | 69 | 24 | | | | | | |
| 20 | 2.8 | 61 | 52 | | | | | | |
| 21 | 2.6 | 74 | 72 | | | | | | |
| 22 | 3.7 | 72 | 78 | | | | | | |
| 23 | 3.6 | 73 | 64 | | | | | | |
| 24 | 2.6 | 77 | 68 | 1300 | 15.99 | 0.03 | 0.02 | 3.30 | 7.6 |
| 25 | 2.3 | 76 | 52 | | | | | | |
| 26 | 2.2 | 72 | 94 | | | | | | |
| 27 | 1.9 | 74 | 70 | | | | | | |
| 28 | 1.6 | 76 | 60 | | | | | | |
| 29 | 1.5 | 76 | 52 | | | | | | |
| 30 | 1.3 | 77 | 46 | | | | | | |
| 31 | 1.1 | 79 | 62 | 1540 | 16.38 | ND | 0.02 | 3.19 | -* |
| Average | 1.5 | 71 | 57 | 1464 | 508 16.82 | <.03 | | 3.50 | |

*Test missed.

**Grab sample.

Table 29.5.

**Champion**

Champion International Corporation

Frenchtown Mill

DIRECT DISCHARGE DATA - OUTFALL 004

MONTH MARCH 19 85

| DATE | AVERAGE FLOW (CFS) | AVERAGE TEMPERATURE (°F) | pH |
|---|---|---|---|
| 1 | 10.7 | 52 | |
| 2 | 12.3 | 63 | |
| 3 | 12.7 | 69 | |
| 4 | 12.3 | 71 | |
| 5 | 13.4 | 74 | |
| 6 | 12.9 | 75 | 8.4 |
| 7 | 12.0 | 73 | |
| 8 | 11.8 | 74 | |
| 9 | 11.8 | 76 | |
| 10 | 10.7 | 73 | |
| 11 | 9.4 | 73 | |
| 12 | 9.1 | 69 | |
| 13 | 10.5 | 70 | 8.0 |
| 14 | 10.0 | 74 | |
| 15 | 10.2 | 74 | |
| 16 | 11.1 | 74 | |
| 17 | 11.1 | 77 | |
| 18 | 12.0 | 78 | |
| 19 | 7.6 | 75 | |
| 20 | 4.2 | 60 | 8.3 |
| 21 | 4.7 | 49 | |
| 22 | 4.5 | 45 | |
| 23 | 3.8 | 51 | |
| 24 | 3.1 | 42 | |
| 25 | 2.9 | 39 | |
| 26 | 3.1 | 39 | |
| 27 | 3.6 | 39 | 8.5 |
| 28 | 12.5 | 40 | |
| 29 | 13.6 | 70 | |
| 30 | 12.5 | 74 | |
| 31 | 13.1 | 73 | |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA

MONTH FEBRUARY 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 1142 | | | | 7:15 | 2 | 7:45 | 7 |
| 2 | 914 | | | | 8:47 | 3 | 9:09 | 8 |
| 3 | 1082 | | | | 9:33 | 3 | 9:56 | 8 |
| 4 | 1058 | | | | 7:45 | 3 | 8:15 | 8 |
| 5 | 1262 | | | | 7:20 | 3 | 7:50 | 7 |
| 6 | 1465 | 32.0 | 12.0 | 12.4 | 7:05 | 3 | 7:35 | 7 |
| 7 | 1658 | | | | 7:20 | 3 | 7:50 | 6 |
| 8 | 1786 | | | | 7:20 | 2 | 7:55 | 6 |
| 9 | 1852 | | | | 7:15 | 2 | 7:45 | 6 |
| 10 | 1852 | | | | 7:25 | 2 | 7:50 | 6 |
| 11 | 1893 | | | | 6:45 | 5 | 7:15 | 6 |
| 12 | 2017 | | | | 7:20 | 1 | 7:50 | 4 |
| | | | | | 13:00 | 2 | 13:25 | 5 |
| 13 | 1879 | 32.0 | | | 7:15 | 3 | 7:45 | 8 |
| 14 | 1906 | | | | 7:20 | 3 | 7:50 | 6 |
| | | | | | 13:20 | 3 | 13:50 | 6 |
| 15 | 1961 | | 12.0 | 12.0 | 6:55 | 4 | 7:25 | 8 |
| | | | | | 11:02 | 4 | 11:30 | 9 |
| 16 | 1989 | | | | 8:25 | 3 | 8:50 | 7 |
| | | | | | 12:37 | 4 | 13:18 | 9 |
| 17 | 1961 | | | | 8:30 | 6 | 9:00 | 10 |
| | | | | | 12:30 | 6 | 12:55 | 10 |
| 18 | 1989 | | | | 7:25 | 7 | 7:55 | 11 |
| | | | | | 11:10 | 7 | 11:40 | 12 |
| 19 | 1893 | | | | 7:20 | 6 | 7:50 | 11 |
| 20 | 2017 | 32.7 | | | 7:15 | 4 | 7:45 | 8 |
| | | | | | 13:05 | 4 | 13:35 | 8 |
| 21 | 2017 | | | | 7:15 | 4 | 7:45 | 8 |
| | | | | | 11:00 | 5 | 11:20 | 9 |
| 22 | 2003 | | 11.5 | 11.7 | 6:50 | 4 | 7:20 | 8 |
| | | | | | 10:50 | 4 | 11:20 | 8 |
| 23 | 2003 | | | | 6:15 | 3 | 6:40 | 7 |

Table 29.5.

Champion

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH FEBRUARY 1985

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 23 | | | | | 10:20 | 5 | 10:40 | 9 |
| 24 | 2031 | | | | 7:15 | 2 | 7:45 | 6 |
| | | | | | 12:05 | 5 | 12:35 | 9 |
| 25 | 2310 | | | | 7:20 | 7 | 7:40 | 7 |
| | | | | | 10:45 | 7 | 11:10 | 9 |
| 26 | 2234 | | | | 7:10 | 13 | 7:40 | 19 |
| | | | | | 13:05 | 12 | 13:30 | 17 |
| 27 | 2175 | 35.6 | | | 7:10 | 11 | 7:40 | 16 |
| | | | | | 11:00 | 11 | 11:25 | 16 |
| 28 | 2146 | | | | 7:15 | 9 | 7:35 | 13 |
| | | | | | 11:00 | 8 | 11:30 | 13 |

Table 29.5.

Champion
Champion International Corporation
Frenchtown Mill

CLARK FORK RIVER DATA

MONTH JANUARY 1985

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR | SIX-MILE TIME | COLOR |
|---|---|---|---|---|---|---|---|---|
| 1 | 2102 | | | | 7:51 | 3 | 8:15 | 7 |
| | | | | | 12:01 | 3 | 12:53 | 9 |
| 2 | 1906 | | | | 9:20 | 4 | 9:45 | 8 |
| | 1947 | | | | 13:45 | 3 | 14:10 | 8 |
| 3 | 1893 | | | | 7:05 | 3 | 7:50 | 7 |
| 4 | 1920 | | | | 7:15 | 3 | 7:45 | 6 |
| | | | | | 13:35 | 3 | 14:05 | 6 |
| 5 | 1760 | | | | 8:15 | 3 | 8:40 | 7 |
| 6 | 1760 | | | | 8:50 | 3 | 9:15 | 6 |
| 7 | 1839 | | | | 7:20 | 3 | 7:50 | 6 |
| 8 | 2059 | | 12.6 | 12.3 | 8:50 | 2 | 9:15 | 5 |
| | 2117 | | | | 13:15 | 3 | 13:45 | 6 |
| 9 | 2045 | 33.8 | | | 7:15 | 3 | 7:35 | 6 |
| | | | | | 11:10 | 3 | 11:40 | 7 |
| 10 | 1893 | | | | 7:10 | 3 | 7:40 | 7 |
| | 1879 | | | | | | | |
| 11 | 1852 | | | | 7:15 | 4 | 7:45 | 7 |
| 12 | 1826 | | | | 8:15 | 3 | 9:00 | 5 |
| 13 | 1786 | | | | 9:10 | 4 | 9:40 | 7 |
| 14 | 1476 | | | | 8:25 | 3 | 8:55 | 7 |
| 15 | 1813 | | | | 7:05 | 3 | 7:35 | 7 |
| | 1947 | | | | 14:30 | 2 | 15:10 | 6 |
| 16 | 1893 | 32.0 | 12.2 | 12.3 | 7:15 | 3 | 7:35 | 6 |
| 17 | 2074 | | | | 7:05 | 3 | 7:35 | 6 |
| | | | | | 13:05 | 2 | 13:35 | 6 |
| 18 | 2264 | | 12.0 | 12.1 | 7:00 | 4 | 7:30 | 8 |
| | | | | | 10:55 | 4 | 11:20 | 10 |
| | | | | | 13:15 | 3 | 13:40 | 7 |
| 19 | 2496 | | | | 6:30 | 3 | 7:30 | 6 |
| | | | | | 13:50 | 3 | 14:15 | 7 |
| 20 | 2642 | | | | 7:00 | 6 | 8:00 | 9 |
| | | | | | 13:00 | 6 | 13:30 | 9 |

Table 29.5.

**Champion**

Champion International Corporation

Frenchtown Mill

CLARK FORK RIVER DATA (CONT.)

MONTH JANUARY 19 85

| DATE | FLOW (cfs) | TEMPERATURE HARPER'S (°F) | DISSOLVED OXYGEN (mg/l) HARPER'S | DISSOLVED OXYGEN (mg/l) SIX-MILE | COLOR (SCU) HARPER'S TIME | COLOR (SCU) HARPER'S COLOR | COLOR (SCU) SIX-MILE TIME | COLOR (SCU) SIX-MILE COLOR |
|---|---|---|---|---|---|---|---|---|
| 21 | 2433 | | | | 7:15 | 11 | 7:45 | 14 |
| | | | | | 11:00 | 11 | [illegible] | [illegible] |
| 22 | 2190 | | | | 7:15 | 4 | 7:45 | 9 |
| | | | | | 10:50 | 6 | 11:30 | [illegible] |
| 23 | 1879 | 34.0 | | | 8:20 | 5 | 8:50 | 10 |
| 24 | 1879 | | | | 7:10 | 5 | 7:40 | 8 |
| 25 | 1747 | | 12.2 | 12.6 | 7:00 | 4 | 7:30 | 7 |
| 26 | 1839 | | | | 7:20 | 4 | 7:50 | 8 |
| 27 | 1773 | | | | 7:25 | 3 | 7:55 | 6 |
| 28 | 1975 | | | | 7:30 | 4 | 8:00 | 7 |
| | 1975 | | | | | | | |
| 29 | 2017 | | 11.9 | 12.2 | 7:00 | 4 | 7:30 | 7 |
| | | | | | 13:35 | 4 | 14:05 | 7 |
| 30 | 1709 | 32.0 | 12.2 | 12.4 | 7:00 | 3 | 7:30 | 7 |
| 31 | 1406 | | | | 7:30 | 3 | 8:00 | 7 |

COMMENTS:

Drawer J
Missoula, Montana
406 ...

Table 29.5.

**Champion**
Champion International Corporation

October 3, 1984

Mr. Steve Pilcher, Chief
Water Quality Bureau, DHES
Cogswell Building
Helena, MT 59620

Dear Mr. Pilcher:

Yearly information on an effluent system for the period July 15, 1983 through July 31, 1984 is as follows:

1. Total volume of effluent discharged during pond dumping was 1814.4 X $10^6$ gallons, 30.0 percent of total effluent volume.

2. $BOD_5$ discharged to the Clark Fork River by percolation, infiltration and direct discharge totalled 1,133,600 lbs.

3. Pond dumping resulted in a discharge of 1,447,800 lbs. of total suspended solids.

4. Effluent disposed of by infiltration was 1162.6 X $10^6$ gallons, 19.2 percent of the total effluent volume.

5. Volume disposed of through evaporation and percolation was 3052.3 X $10^6$ gallons, 50.5 percent of the total effluent volume.

6. $BOD_5$ reduction from the total effluent treatment system was 96.2 percent.

The attached information details the calculations made to derive the values listed above.

Please contact me if you have any questions concerning this report.

Sincerely,

Bill Henderson

Bill Henderson
Environmental Supervisor

sp
Attachment
c: Potts
Marxer → Kohl
Ford
Pavlick
Weeks
Brown
Kulawinski

Volume remaining July 15, 1983 = 122.8 X $10^6$ gallons.

Volume remaining July 31, 1984 = 142.7 X $10^6$ gallons.

Total effluent flow July 15, 1983 $\longrightarrow$ July 31, 1984 = 6049.2 X $10^6$ gallons

Total pounds $Na_2SO_4$ in effluent = 82.6 X $10^6$ lbs.

Test well data, 12-month cumulative average:

$BOD_5$ (mg/l) = 8

$Na_2SO_4$ (mg/l) = 1170

Pond data, 12-month cumulative average:

$Na_2SO_4$ (mg/l) = 1730

Total effluent volume to rapid infiltration:

July 15, 1983 $\longrightarrow$ July 31, 1984 = 1162.6 X $10^6$ gallons.

Average effluent $Na_2SO_4$ concentration =

$$\frac{\text{Total } Na_2SO_4 \text{ in effluent}}{\text{Total effluent volume}} =$$

$$\frac{82.6 \text{ X } 10^6 \text{ lbs.}}{6049.2 \text{ X } 10^6 \text{ gallons}} \text{ X } \frac{1 \text{ ppm}}{8.34 \text{ X } 10^{-6} \text{lbs./gal.}} = 1640 \text{ ppm}$$

$$\text{Percent Evaporation} = 1 - \frac{\text{Average effluent } Na_2SO_4 \text{ concentration}}{\text{Average pond } Na_2SO_4 \text{ concentration}}$$

$$= 1 - \frac{1640}{1730}$$

$$= 0.05$$

Volume Percolated and Evaporated = Pond volume on 7/15/83

+ Total effluent flow

- Volume infiltrated

- Volume direct discharged

- Pond volume on 7/31/84

= (122.8 + 6049.2 - 1162.6 - 1814.4 - 142.7) X $10^6$ gallons

= 3052.3 X $10^6$ gallons

5 Evaporation:

Volume evaporated = (Total effluent flow + pond volume on 7/15/83) X 0.05

= (6049.2 + 122.8) X 0.05

= $308.6 \times 10^{6}$ gallons

Volume percolated = $(3052.3 - 308.6) \times 10^{6}$

= $2743.7 \times 10^{6}$

$BOD_5$ Discharged by percolation and infiltration =

$$\frac{\text{Average pond } Na_2SO_4}{\text{Average test well } Na_2SO_4} \times \text{Average Test Well } BOD_5$$

$$\times \text{ (volume infiltrated + volume percolated)}$$

$$\times \frac{8.34 \times 10^{-6} \text{ lbs./gal.}}{1 \text{ ppm}}$$

$$= \frac{1730}{1170} \times 8 \times [(1162.6 + 2743.7) \times 10^{6} \text{ gallons}]$$

$$\times \frac{8.34 \times 10^{-6} \text{ lbs./gal.}}{\text{ppm}}$$

= 385,400 lbs.

BOD Direct Discharged = 748,200 lbs.

Total $BOD_5$ Discharged = 1,133,600

FIGURE I EFFLUENT FLOW 1983 1984 DISCHARGE SEASON

Table 29.5.

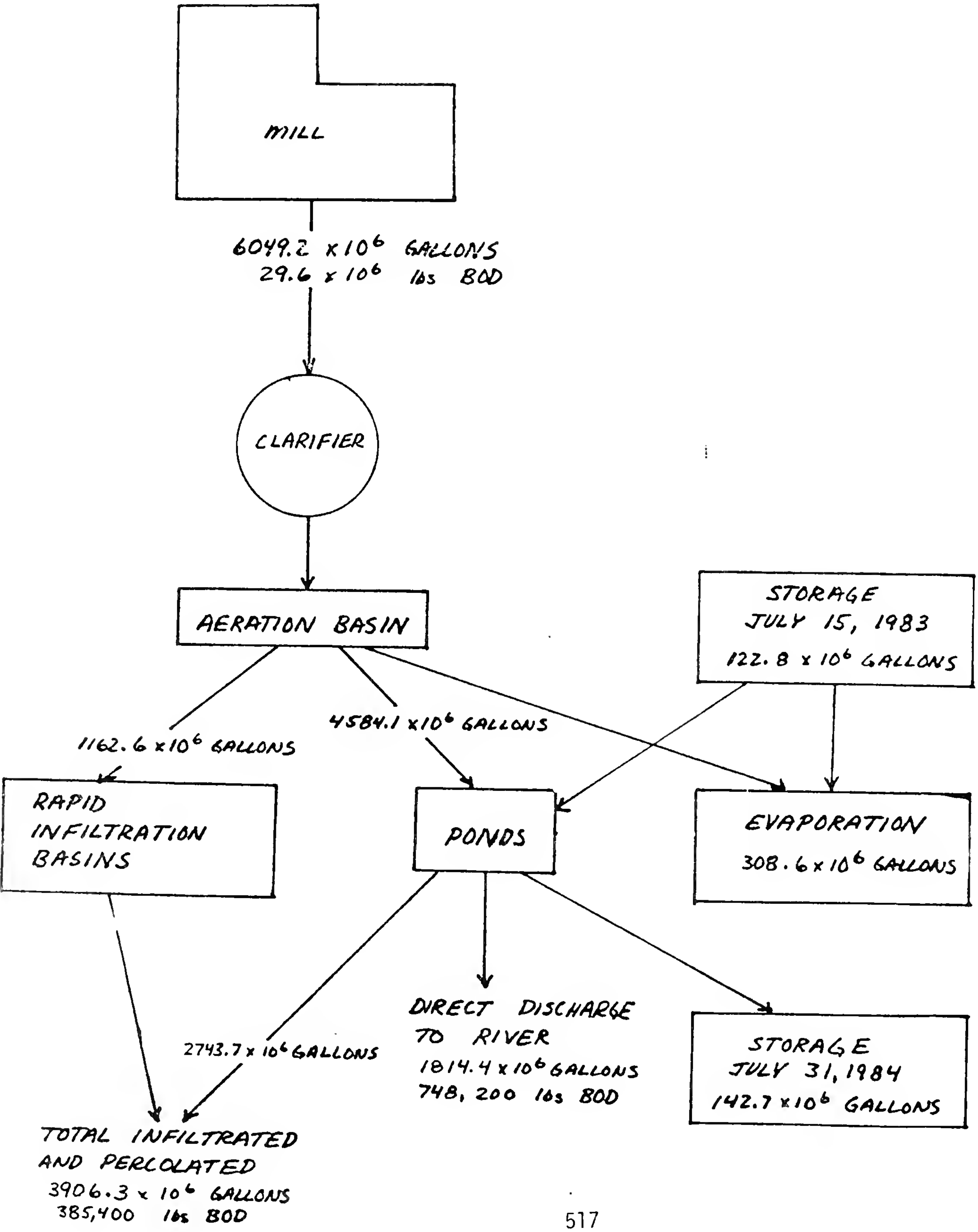


Table 29.5.

**Champion**
Champion International Corporation

September 3, 1985

Mr. Steve Pilcher, Chief
Water Quality Bureau, DHES
Cogswell Building
Helena, MT 59620

Dear Mr. Pilcher:

Yearly information on our effluent system for the period July 1, 1984 through June 30, 1985 is as follows:

1. Total volume of effluent discharged during pond dumping was 2172.9 X $10^6$ gallons, 39.2 percent of total effluent volume.

2. $BOD_5$ discharged to the Clark Fork River by percolation, infiltration and direct discharge totalled 1,464,850 lbs.

3. Pond dumping resulted in a discharge of 1,520,340 lbs of total suspended solids.

4. Effluent disposed of by infiltration was 775.2 X $10^6$ gallons, 14.0 percent of the total effluent volume.

5. Volume disposed of through evaporation and percolation was 2589.5 X $10^6$ gallons, 46.8 percent of the total effluent volume.

6. $BOD_5$ reduction from the total effluent treatment system was 95.1 percent.

Normal calculation of percent evaporation by using sodium concentration in the effluent leaving the mill compared to sodium concentration in the storage ponds did not give a realistic value. Therefore, a mass balance around the effluent treatment system was done to calculate a volume combining percolation and evaporation. In order to calculate a $BOD_5$ value for percolation, a 10% evaporation was assumed.

The attached information details the calculations made to derive the values listed.

Please contact me if you have any questions concerning this report.

Sincerely,

Bill Henderson

Bill Henderson
Environmental Supervisor

kj
c: Potts, Marxer, Kohl, Pavlick, Weeks, R. Brown, Kulawinski, Stengel, Clem, Ahles-Kedziora

Table 29.5.

Volume remaining July 1, 1984 = $225.5 \times 10^6$

Volume remaining June 30, 1985 = $140.4 \times 10^6$ gallons

Total effluent flow July 1, 1984 ------> June 30, 1985 = $5452.5 \times 10^6$ gallons

Total pounds $Na_2SO_4$ in effluent = $68.2 \times 10^6$ lbs.

Test well data, 12-month cumulative average:

$BOD_5$ (mg/l) = 9
$Na_2SO_4$ (mg/l) = 1190

Pond data, 12-month cumulative average:

$Na_2SO_4$ (mg/l) = 1510

Total effluent volume to rapid infiltration:

July 1, 1984 -----> June 30, 1985 = $775.2 \times 10^6$ gallons

Average effluent $Na_2SO_4$ concentration =

$$\frac{\text{Total } Na_2SO_4 \text{ in effluent}}{\text{Total effluent volume}} =$$

$$\frac{68.2 \times 10^6 \text{ lbs}}{5452.5 \times 10^6 \text{ gallons}} \times \frac{1\text{ppm}}{8.34 \times 10^{-6} \text{ lbs./gal.}} = 1500 \text{ ppm}$$

Percent Evaporation =

$$1 - \frac{\text{Average effluent } Na_2SO_4 \text{ concentration}}{\text{Average pond } Na_2SO_4 \text{ concentration}}$$

$$= 1 - \frac{1500}{1510}$$

$$= 0.007$$

Volume Percolated and Evaporated =

Pond volume on 7/1/84
+ Total effluent flow
- Volume infiltrated
- Volume direct discharged
- Pond volume on 6/30/85

$$= (225.5 + 5452.5 - 775.2 - 2172.9 - 140.4) \times 10^6 \text{ gallons}$$

$$= 2589.5 \times 10^6 \text{ gallons}$$

Table 29.5.

Assume 10% evaporation

Volume evaporated = (Total effluent flow + pond volume on 7/1/84) X 0.10

= (5452.5 X 225.5) X 0.10

= $567.8 \times 10^6$ gallons

Volume percolated = Total volume percolated and evaporated - volume evaporated

= $(2589.5 - 567.8) \times 10^6$ gallons

= $2021.7 \times 10^6$ gallons

$BOD_5$ Discharged by percolation and infiltration =

$$\frac{\text{Average pond } Na_2SO_4}{\text{Average test well } Na_2SO_4} \times \text{Average test well } BOD_5$$

$$\times \ (\text{volume infiltrated + volume percolated})$$

$$\times \ \frac{8.34 \times 10^{-6} \text{ lbs/gal}}{1 \text{ppm}}$$

$$= \frac{1510}{1190} \times 9 \times [(775.2 + 2021.7) \times 10^6 \text{ gallons}]$$

$$\times \ \frac{8.34 \times 10^{-6} \text{ lbs/gal}}{\text{ppm}}$$

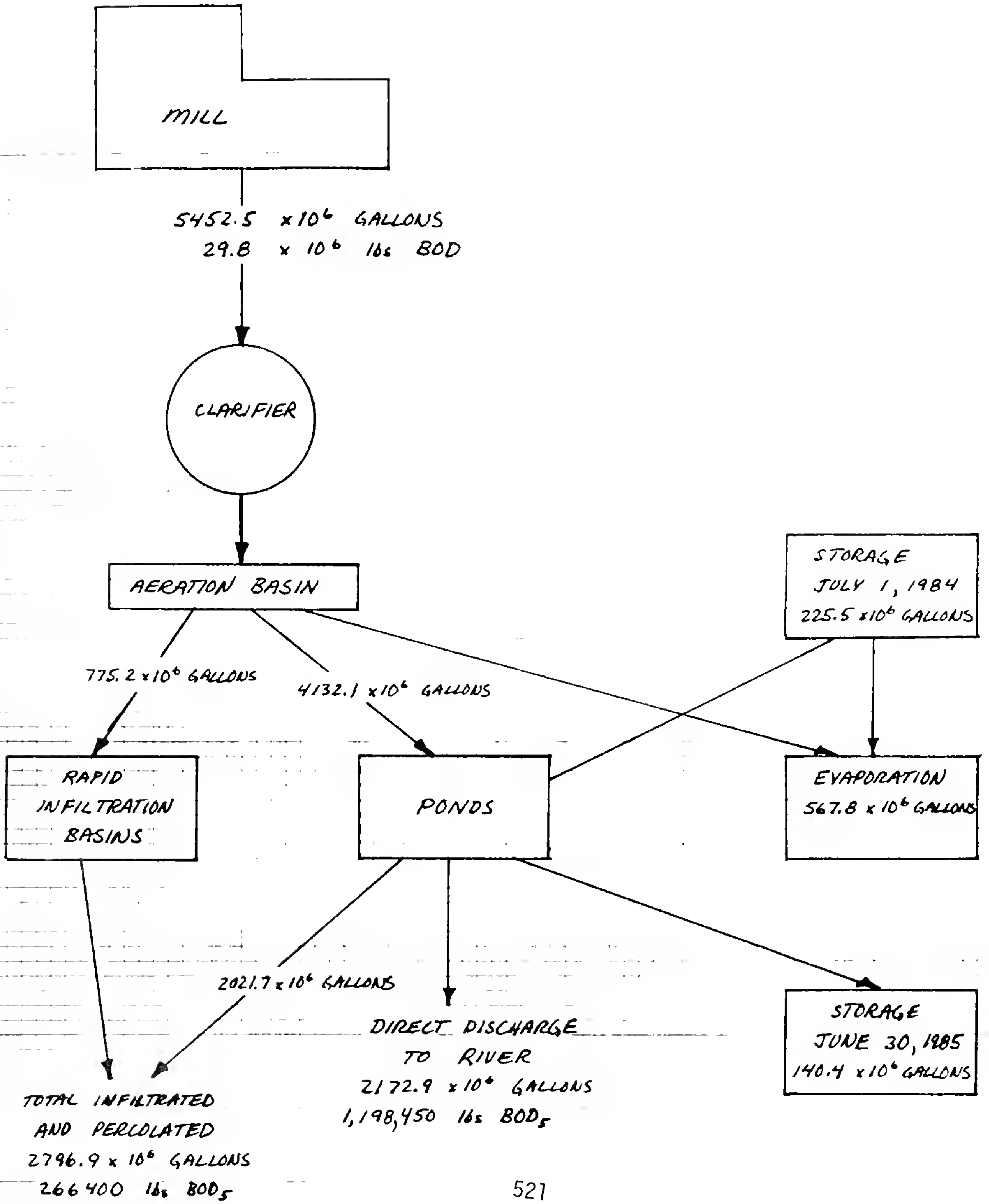
= 266,400 lbs.

BOD Direct Discharged = 1,198,450

Total $BOD_5$ Discharged = 1,464,850

Table 29.5.

FIGURE I EFFLUENT FLOW 1984-1985 DISCHARGE SEASON



## V. CLARK FORK RIVER WATCHER'S RIVER MONITORING DATA

The Clark Fork River Watchers is a citizen's organization of interested in the maintenance and improvement of the Clark Fork River system. The group, composed of several chapters, is an affiliate of the larger Clark Fork Coalition.

Beginning in the summer of 1984 and following state approval of the temporary modification of Champion's discharge permit to allow nearly year around direct discharge, the Plains Chapter of the River Watcher's began to record observations at several stations on the lower Clark Fork. Additionally, members were trained by Water Quality Bureau staff to analyze river samples for dissolved oxygen. The bureau loaned the group an analysis kit.

Since August 1984, the group recorded detailed information on river dissolved oxygen, temperature, water appearance and other observations on a weekly basis in summer and a monthly basis the remainder of the year.

A somewhat condensed version of their observations and river measurements follows in Table 30.

TABLE 30. Clark Fork River Watchers Dissolved Oxygen and Temperature Monitoring Data and Field Observations

PART 1

| Location[1] | Date | Time | Dissolved Oxygen mg/l | Water Temp (°C) | Air Temp (°C) | Surface (S) or Deep Grab (DG) | Water Appearance (color, clarity) | Scum (S) or Foam (F) Present | % Surface Covered | Where Found-- Back Waters (BW) or Main Channel (MC) |
|---|---|---|---|---|---|---|---|---|---|---|
| PFB | 8/1/84 | 0445 | 7.6 | 21.1 | --- | S | Clear, Dark Without Sediments | F-White, Thin Clumps | <1% | BW |
| PFB | 8/1/84 | 0505 | 8.6 | 21.1 | --- | DG-10' bottom | Cloudy, Green-Brown | F-White, Thin Clumps | 1% | BW |
| SRCO | 8/1/84 | 0615 | 8.3 | 19.4 | --- | DG-16' not bottom | Clear | --- | --- | --- |
| SRCO | 8/1/84 | 0620 | 8.0 | 19.4 | --- | S | Clear | --- | --- | --- |
| PFB Beach | 8/8/84 | 0445 | 8.0 | 18.9 | --- | S | Slightly Cloudy | F-White, Thin Clumps | 5% | BW |
| PFB Under Bridge | 8/8/84 | 0510 | 8.3 | --- | --- | DG-10' | Slightly Cloudy | F-White, Thin Clumps | 5% | BW |
| SRCO | 8/8/84 | 0545 | 8.3 | 18.3 | --- | S | Clear | F-Small, White Bubbles | >1% | BW-Along Shore |
| SRCO | 8/8/84 | 0555 | 8.6 | --- | --- | DG-10' | Murky | F-Small White Bubbles | >1% | BW-Along Shore |
| PFB Under Bridge | 8/15/84 | 0445 | 7.5 | --- | -- | DG-10' | Clear | F-White, Thin Bubbles | >1% | BW |
| PFB Beach | 8/15/84 | 0515 | 7.0 | 18.9 | --- | S | Very Clear | F-White, Thin Bubbles | >1% | BW |
| PFB Beach | 8/22/84 | 0540 | 7.8 | 18.6 | [illegible] | S | Clear | None | --- | --- |

Table 30. Part 1 Continued

| Location[1] | Date | Time | Dissolved Oxygen mg/1 | Water Temp (°C) | Air Temp (°C) | Surface (S) or Deep Grab (DG) | Water Appearance (color, clarity | Scum (S) or Foam (F) Present | % Surface Covered | Where Found Back Waters (BW) Main Channel (MC |
|---|---|---|---|---|---|---|---|---|---|---|
| SRCO | 8/22/84 | [illegible] | 8.5 | 17.2 | 8.9 | S | Clear | F-Thin, White Clumps | 2% | BW |
| PFB Beach | 8/27/84 | [illegible] | 7.1 | 20.0 | 21.1 | S | Mild Turbidity | F-White | >1% | MC |
| PFB | 8/29/84 | [illegible] | 8.1 | 16.7 | 6.1 | S | Clear | F-White | >1% | BW |
| SRCO | 8/29/84 | [illegible] | 9.0 | 15.6 | 7.8 | S | Murky-Quite Turbid | F-White | 1% | MC |
| PFB Beach | 9/5/84 | [illegible] | 9.1 | 16.7 | 8.9 | S | Clear | F-Small, Thin White Clumps | 5% | BW |
| SRCO | 9/5/84 | [illegible] | 9.0 | 15.6 | 10.0 | S | Mild Turbidity | F-Small, Thin White Clumps | >1% | MC |
| PFB Beach | 9/12/84 | [illegible] | 9.6 | 12.8 | 2.2 | S | Clear | F-White Clumps Larger Than Usual | 1% | BW |
| SRCO | 9/12/84 | [illegible] | 9.6 | 12.2 | 3.9 | DG | Very Cloudy | F-White | | |
| | | | | | | | | Thick, Large Clumps | 5% | MC |
| | | | | | | | | Small Bubbles | 10% | BW |
| SRCO | 9/12/84 | [illegible] | 8.1 | 12.2 | 3.9 | S | Very Cloudy, Heavy Suspended Sediments | F-White | | |
| | | | | | | | | Thick, Large Clumps | 5% | MC |
| | | | | | | | | Small Bubbles | 10% | BW |
| PFB Beach | 9/20/84 | [illegible] | 9.3 | 14.4 | 12.8 | S | Clear Along Shore | F-Some Very Large Bubbles & Thin Clumps | -- | BW |
| SRCO | 9/20/84 | [illegible] | 9.0 | 13.9 | 12.8 | S | Cloudy | F-White, Thin Bubbles | -- | Primarily MC Some in BW |
| PFB Beach | 10/3/84 | [illegible] | 10.5 | 10.0 | 1.1 | S | Clear | F-White, ½"-1½" High Clumps of Bubbles | 2% | BW-Too Foggy to See MC |
| SRCO | 10/3/84 | [illegible] | 10.7 | 8.9 | 4.4 | S | Clear | F-Thin, White Bubbles | <1% | MC |

Table 30. Part 1 Continued

| Location[1] | Date | Time | Dissolved Oxygen mg/l | Water Temp (°C) | Air Temp (°C) | Surface (S) or Deep Grab (DG) | Water Appearance (color, clarity) | Scum (S) or Foam (F) Present | % Surface Covered | Where Found--Back Waters (BW) or Main Channel (MC) |
|---|---|---|---|---|---|---|---|---|---|---|
| PFB Beach | 10/17/84 | 0805 | 11.0 | 7.2 | -5.6 | S | Clear | F-½" White Bubbles | 10% | BW - Too Foggy to See More Than 10 yards |
| SRCO | 10/17/84 | 0845 | 11.5 | 5.6 | -4.4 | S | Clear | F-Thin Clumps | 2% | MC |
| PFB Beach | 11/13/84 | 0730 | 11.7 | 3.9 | 1.1 | S | Clear | F-White Mostly, Some Yellowish Brown, ½" - 2½" Clumps | 1% | BW |
| SRCO | 11/13/84 | 0830 | 11.7 | 3.9 | 1.1 | S | Clear | F-White ½" Clumps | 5% | MC |
| PFB Beach | 12/11/84 | 0745 | 13.3 | -1.1 | -8.9 | S | Very Clear | F | >1% | BW Mostly |
| SRCO | 12/11/84 | 0825 | 14.2 | -1.7 | -6.7 | S | Clear | --- | --- | --- |
| PFB Beach | 1/29/85 | 0900 | 14.3 | -1.7 | -6.7 | S | Clear | F-Small, Frozen, Thin Clumps, White | 2% | Mainly BW Some in MC |
| SRCO | 1/29/85 | 0930 | 13.6 | -1.7 | -5.6 | S | Clear | See Comments | --- | --- |
| PFB Beach | 2/28/85 | 0715 | 14.0 | 0.0 | -3.3 | S | Very Cloudy | F-White, ½"-1" Clumps | 2-5% | BW and MC |
| SRCO | 2/28/85 | 0750 | 13.3 | No reading | -1.1 | S | Very Cloudy | F-White to Light Brown | 1% | MC, BW Mostly Covered With Ice |
| PFB | 3/29/85 | 0630 | 13.3 | 3.3 | -3.3 | S | Murky With Suspended Organic Material | F-Tan To Brown. Thicker & Dirtier Looking Than Usual | 10% | BW & MC |
| SRCO | 3/29/85 | 0705 | 12.3 | 4.4 | -2.2 | S | Greenish Brown, Very Murky, Suspended Organics | F-Tan to Brown Very Large Clumps ½"-3" | 5%<br>5-20%<br>up to 30% | BW<br>MC<br>in Eddies |

Table 30. Part 1 Continued

| Location[1] | Date | Time | Dissolved Oxygen mg/l | Water Temp (°C) | Air Temp (°C) | Surface (S) or Deep Grab (DG) | Water Appearance (color, clarity) | Scum (S) or Foam (F) Present | % Surface Covered | Where Found: Back Waters (BW) Main Channel (MC) |
|---|---|---|---|---|---|---|---|---|---|---|
| PFB | 4/30/85 | 0605 | 11 | 8.3 | -3.3 | S | Less Cloudy Than 1 Month Ago | F-Tan, Flat Bubbles 3" and Larger; Large Collections Several Feet Across | 10% | BW |
| SRCO | 4/30/85 | 0645 | 10.6 | 10.0 | 0.6 | S | Slightly Murky, Although Much Clearer Than Last Time | F-White, up to 3" | 2%<br>5% | MC<br>in Eddies |
| PFB | 5/30/85 | 0630 | 10.5 | 10.0 | 2.2 | S | Turbid | F-White, Flat-1" | 2% | MC & BW |
| SRCO | 5/30/85 | 0700 | 10.6 | 8.9 | 2.2 | S | Turbid | F-Muddy-Looking | 1% | BW |
| PFB | 7/9/85 | 0630 | 8.6 | 21.1 | 13.3 | S | Clear | F-White, Thin Clumps | 10% | BW |
| SRCO | 7/9/85 | 0700 | 8.6 | 19.4 | 14.4 | S | Clear | F-White, Flat Clumps | 1% | BW |
| PFB | 8/1/85 | 0600 | 7.2 | 22.2 | 14.4 | S | Some SS | F-White ½", Large Clumps | 2-5% | MC Primarily |
| SRCO | 8/1/85 | 0645 | 8.0 | 18.9 | 13.3 | S | Slightly Turbid | F-White, ½" | 10% | MC |

1 PFB - Clark Fork at Plains Fairground Bridge
SRCO - Clark Fork at crossing near St. Regis Cutoff Road

Table 30. Part 2

PART 2

| Date | Time | Streambed Character | General Weather Conditions | Wildlife and Other Observations | Fish-Frequency of Rising, Species & Related Information | Comments-Water Level, Odor, Precipitation, Winds, Events Along River |
|---|---|---|---|---|---|---|
| 8/1/84 | 0445 | Sandy Beach, Fine Silt | --- | --- | None Rising | --- |
| 8/1/84 | 0505 | Algae-About 50% Cover, Large Amounts of Sediments | --- | Family of Ducks Feeding at 10:30 on Return Trip | Single Rise | --- |
| 8/1/84 | 0615 | No Algae Seen, Thick Sediment in Backwater | --- | 8 Canada Geese Noted on Sandbar Between Plains and Paradise at 1000 | 1 Squawfish-18", 1 Squawfish-14", Rainbow Trout-14", Appears Well Fed, Few Fish Rising | --- |
| 8/1/84 | 0620 | --- | --- | --- | --- | --- |
| 8/8/84 | 0445 | Sandy Beach, Some Suspended Sediments | --- | Heard Water Fowl, Swallows & Sandpipers | Some Fish Rising | Musty Smell, Heavy Rain during Past Week |
| 8/8/84 | 0510 | --- | --- | Heard Water Fowl, Saw Great Blue Heron Fishing East of Bridge | Some Fish Rising | Musty Smell, Heavy Rain during Past Week |
| 8/8/84 | 0545 | Rocks Covered With Green Slime | Clear, Breezy, Surface Rippled | | No Fish Caught, Some Rising | Musty Smell, Heavy Rain During Past Week, "Liming" or "White Washing" of Rocks 6' Above Water |
| 8/8/84 | 0555 | Rocks Covered With Green Slime | Clear, Breezy, Surface Rippled | | No Fish Caught, Some Rising | Musty Smell, Heavy Rain During Past Week, "Liming" or "White Washing" of Rocks 6'Above Water |

Table 30. Part 2 Continued

| Date | Time | Streambed Character | General Weather Conditions | Wildlife and Other Observations | Fish-Frequency of Rising, Species & Related Information | Comments-Water Level, Odor, Precipitation, Winds, Events Along River |
|---|---|---|---|---|---|---|
| 8/15/84 | 0445 | About 50% Algae, Looks Like It'd Be Slippery | Calm, Clear | Heard 1 Duck, Heard Beaver Slap the Water Several Times | A Few Fish Rising | Water Seems to Have Dropped Several Inches Since Last Week |
| 8/15/84 | 0515 | Sandy Bottom | Calm, Clear | Swallows Beginning to Fly | Some Fish Rising | Water Seems to Have Dropped Several Inches Since Last Week |
| 8/22/84 | 0540 | Sandy | Calm, Clear | Minnows Present in Shallows, Heard Waterfowl | No Fish Rising | Water Down Several Inches Again |
| 8/22/84 | 0620 | Rocks Covered With Algae | Clear & Windy | --- | Fish Rising Frequently | "White-Wash" Apparent on Freshly Exposed Rocks |
| 8/27/84 | 1130 | Sandy Bottom | Warm & Windy | | Some Fish Jumping | |
| 8/29/84 | 0600 | Sandy Bottom | Overcast & Calm | --- | Few Fish Rising | Two Previous Days Experienced High Steady Wind, Water Up About 6" |
| 8/29/84 | 0645 | Algae in Large Quantities, See Comments | Overcase With Light Breeze | --- | Many Fish Jumping, Rising Almost Constantly, Minnows in Shallows | Algae in Clumps & Filaments-Quite Prevalent, Sand has Been Deposited Along Shoreline Rocks, Water Down About 4" |
| 9/5/84 | 0630 | Sandy Bottom | Cool, Overcast, Calm | --- | Fish Rising Frequently | Water up About 10", Strong Musty Odor, Two Days of Steady Rain Between Testings |
| 9/5/84 | 0715 | Both Algae & Sediments | Breezy, Overcast | Two Ducks Near Shore, Saw Blue Heron Near Paradise (as Usual) | Some Rising-Some Clearing the Water | Water Up About 12", Foam is Heavier Here (Compared to Plains), Strong Musty Odor Even With Good Breeze, Algae Appearing in Larger Clumps Than Last Week, Rock Surfaces Are Slimy & Slippery in Water |

Table 30. Part 2 Continued

| Date | Time | Streambed Character | General Weather Conditions | Wildlife and Other Observations | Fish-Frequency of Rising, Species & Related Information | Comments-Water Level, Odor, Precipitation, Winds, Events Along River |
|---|---|---|---|---|---|---|
| 9/12/84 | 0615 | Sandy Bottom | Light Fog Rising Partly Cloudy, Calm | Saw 2 Beaver, Heard 1 Duck | Few Fish Rising | Water Down About 6" Since Last Testing Rain During Night & For 2 Days Since Last Test |
| 9/12/84 | 0705 | 100% Covered By Algae, Very Slimy | Partly Cloudy, Breezy | --- | Very Few Fish Rising | Water Level Seems Unchanged, Rain as Above, Water in Test Vial Very Cloudy |
| 9/12/84 | 0715 | Rock Entirely Covered With Algae, By Shore Too | Partly Cloudy, Breeze | Small Flock of Ducks Flew Over Water | --- | Saw Many Areas of the Shoreline Lined with Unbroken Blocks of Foam Collections-Maybe up to 10" High |
| 9/20/84 | 0715 | Sandy Bottom | Steady Rain Through Night | Saw 1 Beaver Swimming | Only a Few Fish Rising, Rising Becoming More Frequent by End of Test | Water Seems up a Few Inches, On 18th Saw Heavy Brown Foam Covering An Area Approximately 100 x 150 Yards in an Eddy-NW of Plains-Took Photo |
| 9/20/84 | 0745 | No Clumps of Algae Where Usually Seen | Summerlike-70s 80s in Day and 50s at Night, Raining Steadily, No Breeze | --- | Rising Frequently | Water Down About 6", Large Blocks of of Foam Seen on Shoreline, Musty Odor Present |
| 10/3/84 | 0700 | Sandy | Dry, Foggy | Beaver Swimming | None Rising | Have Had Several Warm Days After A a Week of Cold Water |
| 10/3/84 | 0735 | Rocks Appear "Clean" | Clear & Windy | --- | | Water Seems Up About 6" |
| 10/17/84 | 0805 | Sandy | Clear, Cold, Very Foggy | --- | Heard Fish Rise | Musty Odor by Water As Usual |

Table 30. Part 2 Continued

| Date | Time | Streambed Character | General Weather Conditions | Wildlife and Other Observations | Fish-Frequency of Rising, Species & Related Information | Comments-Water Level, Odor, Precipitation, Winds, Events Along River |
|---|---|---|---|---|---|---|
| 10/17/84 | 0845 | Heavy Algae On Rocks Out About 4', Heavy Sediments on Rocks Closer to Shore | Clear, Cold, Very Windy | --- | None Rising | Water Down About 6", Heaviest "Liming" on Rocks so Far, Noting Heavy Patches of Foam on Surface of of Running Water-At Riffles-As Well as Large Blocks of Foam on Shoreline that Look Like Styrofoam |
| 11/13/84 | 0730 | Sandy | Cold, Cloudy, Foggy | --- | Some Fish Rising | Very Little Wind in the Past Month Water Level Seems Up Since Last Month, Mostly Cool Weather With Rain & Snow and Fair Amount of Snow Melt |
| 11/13/84 | 0830 | Algae on Rocks by Shore | Windy, Cold, Low Clouds | 1 Duck | No Fish Rising | Some Blocks of Foam Along Shoreline High Winds Concurrent With Test, Water Level Same as 1 Month Ago, Heavy Foam in Eddys Along the Cut-off |
| 12/11/84 | 0745 | Sandy | Clear & Cold | --- | --- | Water Up Since Last Test, Has Been Generally Cold With Snow and Rain, Some Ice on River, Some Snowmelt |
| 12/11/84 | 0825 | Algae on Rocks | Clear & Cold | --- | --- | Many Sections of the River are Covered With Ice, Floating Chunks of Ice Also |
| 1/29/85 | 0900 | Brown Algae Either Growing or Has Been Deposited on Sandy Bottom | Cold, Partly Cloudy, Snow Predicted | --- | Saw Many Fish Rising Within A Couple of Minutes | Saw About 1½ Dozen Pieces of Water Weeks or Grasses Float By, Small Amounts of of Slush and Ice Moving, Water Level Same |

Table 30. Part 2 Continued

| Date | Time | Streambed Character | General Weather Conditions | Wildlife and Other Observations | Fish-Frequency of Rising, Species & Related Information | Comments-Water Level, Odor, Precipitation, Winds, Events Along River |
|---|---|---|---|---|---|---|
| 1/29/85 | 0930 | --- | Cold, Breezy Overcast Starting to Snow | --- | --- | Brown Scum Deposits on Edges of Ice in River, Heavy "White-Washing" Material Coming Off With Ice-Saw Deposits Imprisoned in Ice, Water Down about 12", Lots of Slush Moving |
| 2/28/85 | 0715 | Algae, Sediments Dead Diatoms(?) Building Up on Sand | Cold, Partly Cloudy, Looks Like Snow or Fog In Hills Around Town | 1 Duck in Water 2 Geese Overhead | No Fish Rising | Occasional High Winds in Past Week, Snow & Rain Since Last Test, Have Had Many Warm Days in Past 2 Weeks Lots of Snow Melt but Snow is Dis-appearing More Slowly Than in Past Years, Water Down About 8" |
| 2/28/85 | 0750 | Could Not See Due to Ice Along Shore & Turbid-ity of Water | Cold, Windy, Mostly Cloudy | --- | Saw 1 Fish Rise | Judging From Ice Rim on Rocks Water Down About 18-24", Newly Exposed Rocks Show Heavy Green Coloration, Where Ice has Lodged at a Slant Underwater-Providing Backdrop-Water Appears a Very Murky Green, Ice Rimmed by Brown in Many Places, High Winds Currently |
| 3/29/85 | 0630 | Usual Sandy Bottom Covered by Greenish-Brown Algae | Cold, Calm, Mostly Cloudy, No Precipitation in Past 24 Hours | 3 Geese, 2 Ducks | Saw Many Fish Rising, Probably the Most We've Ever Seen While Testing | Water Level has Dropped, Can See the "White-Washing" and Algae Growth Deposits on Shore in Plains as on the SRCO, This was not Noticeable Last Fall, Slight Musty Odor Present, Have had Snow and Rain Since Last Testing and a Couple of Days of High Winds, Water Level Remains Low, Down About 6" Since Last Test |

Table 30. Part 2 Continued

| Date | Time | Streambed Character | General Weather Conditions | Wildlife and Other Observations | Fish-Frequency of Rising, Species & Related Information | Comments-Water Level, Odor, Precipitation, Winds, Events Along River |
|---|---|---|---|---|---|---|
| 3/29/85 | 0705 | Very Heavy Algae, Rocks in Water are Greenish-Brown Rocks Above Water Have Thick Dirty-White ½" Deposits | Cloudy, Cool Calm for a Change | 2 Ducks, Saw 30 Bighorn Sheep, 3 Bands on the Other Side of River | A Few Rising | The Most Foam We've Ever Seen on the River and it has a Much Dirtier Appearance than Usual, Water Down About 6" |
| 4/30/85 | 0605 | Sandy With Algae Deposits in Sand Ripples | Clear, Calm, Cold | Heard 1 Goose, 1 Duck and Meadow Larks | Saw Several Dozen Rise While Taking Sample | Some Fog Rising, Snow Melting in Mountains-½ of Baldy Heart is Still Covered, Have Had 6 Very Windy Days, Noxon Reservoir has Been Drawn Down to Increase Power, Water up at Least 8"-Strong Flow in MC |
| 4/30/85 | 0645 | Algae & Sandy Deposits on Rocky Bottom | Windy, Clear Cold | --- | None Rising | Current is Very Strong Here-Whirlpools Forming Quickly and Loudly and Then Disappearing, |
| 5/30/85 | 0630 | Same as Last Month | Wet-Steady Rain For the Past 36 Hours | Even the Ducks Aren't Out, Only Two Fools in Mobile Test Unit #1 | None Rising | Incredible Amount of Fast-Moving Water! Rain is Falling Here, Snow at About 3200', Precipitation Off and On for About 6 Days, This Should Help Noxon Reservoir, Down to Almost No Water with Huge Mud Flats, Have had 2 Weeks of Hot, Dry Weather, Remaining Snow Melted from Mountains Around Plains |
| 5/30/85 | 0700 | Looking Cleaner Than Usual | Wet-A Little Snow Mixed With Rain, Windy & Cool | --- | None | Water Level up to the Base of Trees 100 Yards to Our Left, Slight Musty Odor |

Table 30. Part 2 Continued

| Date | Time | Streambed Character | General Weather Conditions | Wildlife and Other Observations | Fish-Frequency of Rising, Species & Related Information | Comments-Water Level, Odor, Precipitation, Winds, Events Along River |
|---|---|---|---|---|---|---|
| 7/9/85 | 0630 | Dark Green, Algae & Sed-iments | Clear, Warm | --- | None | Unusually Warm with Low Water for so Early in the Year, No Odor, No Precipitation in One Month, High Winds Daily |
| 7/9/85 | 0700 | Sand on Rocks Fairly Clean Looking | Warm, Calm | Swallows in Flight | None Rising | Water 6" Below High Water Mark |
| 8/1/85 | 0600 | The Usual | Rain 4-5 Hours On 7/31 During Night After Two Dry Months, Sprinkling Now | A Few Ducks | Not Many Rising But Are Steady, Saw Some Fry in Flashlight Beam | Dept. of Fish, Wildlife & Parks Electro-Shocked Fish by PFG Two Weeks Ago, Water Level has Dropped About 1' Since Last Testing, At Thompson Falls Daily Flow was Reported at 12,000 cfs this Past Week, One Year Ago it was 17,000 cfs, Wet Beach Smells Very Bad, Hot, Dry Winds Off and on Since Last Test, Noxon and Cabinet Dams to be Lowered in the Next Week by WPPS for Work on Dams |
| 8/1/85 | 0645 | Very Large Clumps of Algae, Some Fixed and Some Moving on Down-stream | Sprinkling | --- | A Few Rising | Water is the Lowest We've Ever Seen at This Spot-a Small Sandbank has been Exposed Close to Shore and the "Island" Across the River is No Longer an Island, Drought Conditions in Most of the State with Many Rivers Down to Bare Trickle, DFWP Negotiating With Water Users to Maintain Enough Flow for Fisheries Survival |

The investigators for these data were Charles Woolley and Judy Woolley except for 8/1/84 when it was just Charles Woolley; 8/8/84 when Darryl Olsen joined them and 12/11/84 when Fred Roche joined them.

## VI. STREAMFLOW DATA

The water quality data thus far presented together with streamflow records will be the basis for loading calculations for the various pollutants discussed in the EIS. Stream and wastewater discharge flow rates for the days when samples were collected are listed in Table 5. However, monthly average streamflows will be needed to compute monthly average loads of pollutants in the EIS. These data for selected gaging stations in the Clark Fork basin are given in Table 31. Figures 22-25 are hydrographs comparing annual streamflows for water years* 1984 and 1985 at each of four gaging stations in the basin. The hydrographs allow a comparison of runoff patterns between each of the two years of study.

* A water year is a 12-month period beginning in October and ending in September.

Table 31. Monthly Average Streamflows at Selected Gaging Stations in the Lower Clark Fork Basin, Water Years 1984-1985

| | | Water Year 1984 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Source | Station | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept |
| 1. | Clark Fork Near Clinton | 939 | 851 | 569 | 1190 | 694 | 784 | 1153 | 1992 | 2632 | 879 | 527 | 725 |
| 1. | Rock Creek Near Clinton | 291 | 276 | 178 | 269 | 214 | 252 | 560 | 1721 | 2338 | 859 | 399 | 338 |
| 1. | Blackfoot Near Bonner | 700 | 688 | 409 | 753 | 593 | 723 | 1663 | 3442 | 4497 | 1665 | 828 | 738 |
| 1. | Clark Fork Above Missoula | 1981 | 1927 | 1154 | 2044 | 1561 | 1856 | 3458 | 7065 | 9278 | 3360 | 1742 | 1802 |
| 1. | Clark Fork Below Missoula | 3583 | 3513 | 2045 | 3350 | 2798 | 3219 | 5756 | 13170 | 20160 | 6845 | 2884 | 3348 |
| 1. | Clark Fork At St. Regis | 4133 | 4323 | 2642 | 4360 | 3667 | 4161 | 7371 | 16310 | 24750 | 8492 | 3636 | 3897 |
| 1. | Clark Fork Near Plains | 14550 | 14760 | 12980 | 16750 | 14090 | 13270 | 15750 | 24010 | 44880 | 20110 | 10170 | 12470 |
| 2. | Clark Fork Below Thompson Falls Dam | 15215 | 15390 | 12180 | 17190 | 14840 | 13570 | 15540 | [illegible] | 45572 | 21440 | 10770 | 13030 |
| 1. | Prospect Creek at Thompson Falls | 52.0 | 51.3 | 58.8 | 127 | 118 | 154 | 272 | 503 | 526 | 148 | 77.0 | 60.2 |
| 1. | Clark Fork Below Noxon Rapids Dam | 14100 | 14790 | 12050 | 16490 | 14560 | 13490 | 16770 | 26700 | 46030 | 21130 | 10210 | 12270 |
| 1. | Clark Fork at Whitehorse Rapids | 15560 | 16380 | 13360 | 18540 | 16500 | 15390 | 19370 | 30750 | 51440 | 24250 | 11490 | 14010 |

Table 31 Continued

Water Year 1985

| Source | Station | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | July | Aug | Sep |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3. | Clark Fork Near Clinton | 825 | 786 | 605 | 514 | 504 | 695 | 1082 | 777 | 440 | 162 | 286 | 56 |
| 3. | Rock Creek Near Clinton | 288 | 250 | 190 | 137 | 156 | 202 | 544 | 1407 | 889 | 267 | 282 | 36 |
| 3. | Blackfoot Near Bonner | 668 | 634 | 486 | 494 | 480 | 542 | 1729 | 4403 | 2615 | 751 | 603 | 82 |
| 3. | Clark Fork Above Missoula | 1832 | 1726 | 1391 | 1449 | 1380 | 1508 | 3370 | 6570 | 3997 | 1203 | 1208 | 177 |
| 3. | Clark Fork Below Missoula | 3209 | 2951 | 2177 | 1969 | 1804 | 2309 | 6086 | 12940 | 8651 | 1832 | 2021 | 336 |
| 3. | Clark Fork At St. Regis | 3850 | 3707 | --- | --- | --- | --- | 8647 | 18450 | 12730 | 3064 | --- | -- |
| 3. | Clark Fork Near Plains | 13700 | 12970 | 13680 | 13840 | 12910 | 10580 | 16390 | 34260 | 34190 | 13090 | --- | -- |
| 2. | Clark Fork Below Thompson Falls Dam | 14230 | 13350 | 14470 | 14280 | 13240 | 11030 | 16590 | 36206 | 38013 | 13879 | 14018 | 1690 |
| 3. | Prospect Creek At Thompson Falls | 47.6 | 55.8 | 59.6 | 50.5 | 42.9 | 63.8 | 508 | 847 | 518 | 138 | 88.0 | 70. |
| 3. | Clark Fork Below Noxon Rapids Dam | 13520 | 12600 | 13450 | 13280 | 12530 | 14160 | 19210 | 33610 | 36020 | 13360 | 12880 | 1642 |
| 3. | Clark Fork at Whitehorse Rapids | 14760 | 14030 | 14900 | 14810 | 14160 | 15850 | 22490 | 38670 | 41070 | 15520 | 14190* | -- |

Sources
1. U.S. Geological Survey Water Data Report MT-84-2.
2. Montana Power Company, unpublished records.
3. U.S. Geological Survey unpublished provisional records.

* August flow is average of days 1-27. Records for last 4 days of month not available at time of report preparation.

Figure 22. Hydrographs for Clark Fork near Clinton, Water Years 1984 and 1985 (Source: U.S. Geological Survey)

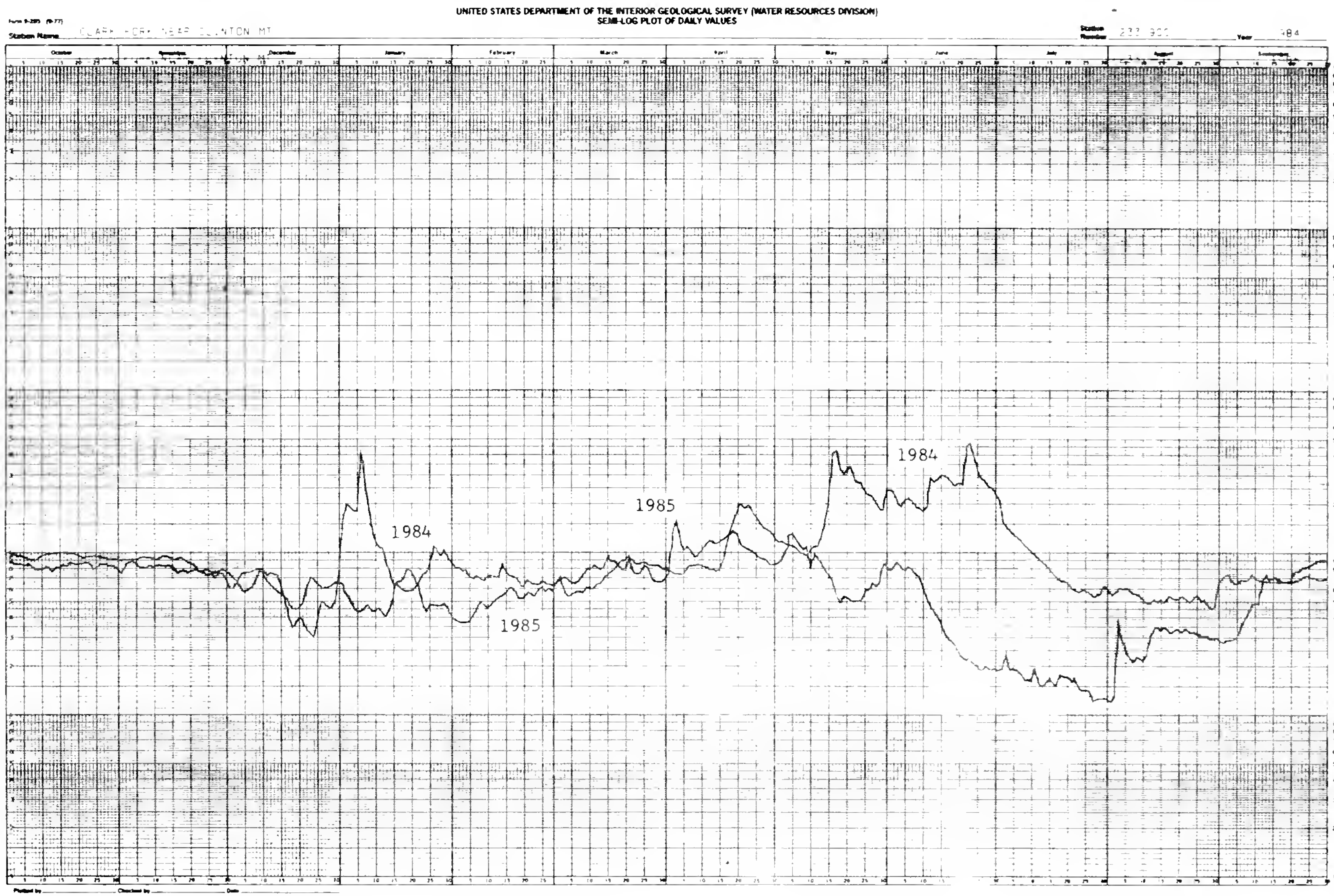


Figure 2[illegible]. Hydrographs for Blackfoot River near Bonner, Water Years 1984 and 1985
(Source: U.S. Geological Survey)

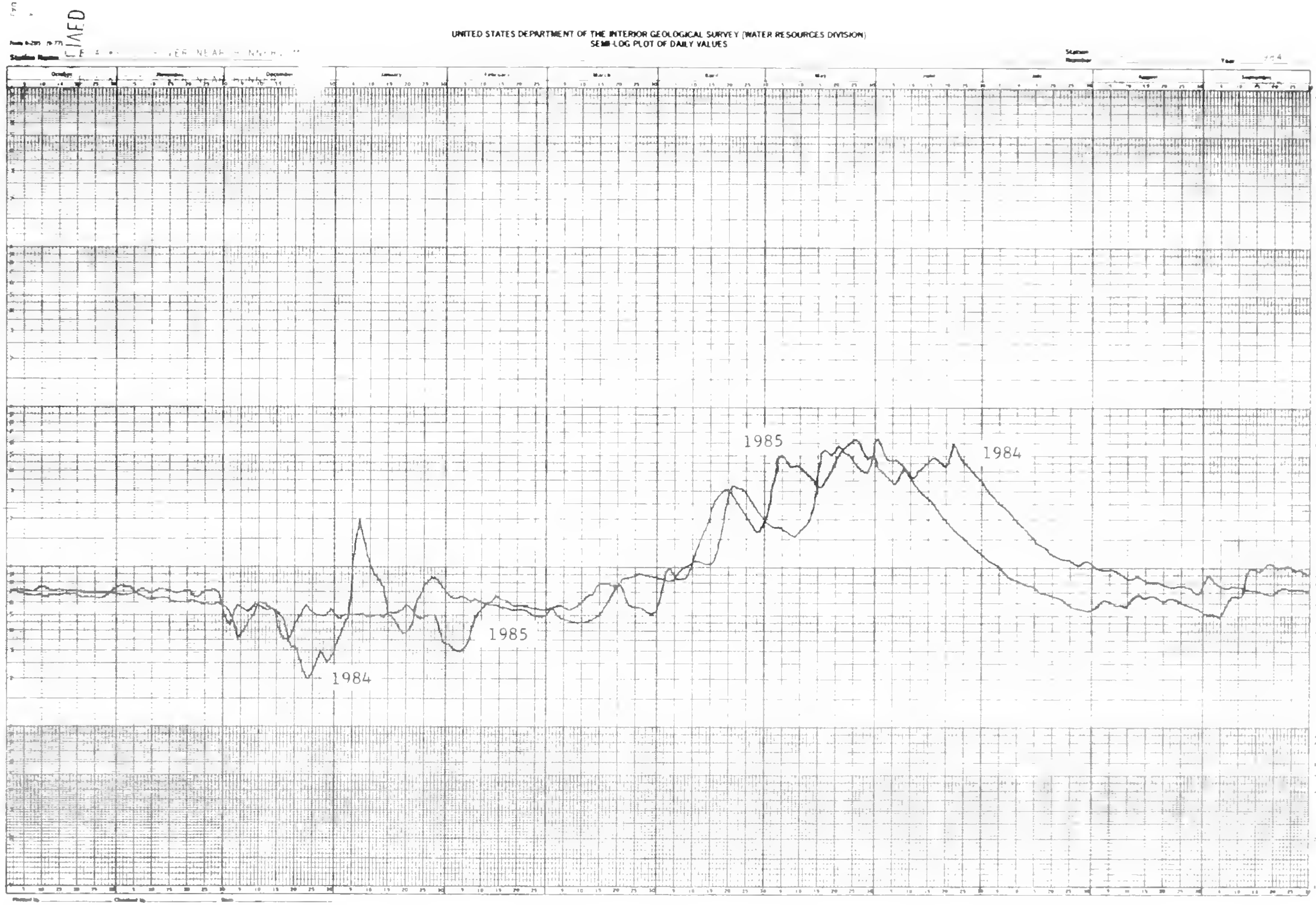


Figure 24. Hydrographs for Clark Fork Above Missoula, Water Years 1984 and 1985 (Source: U.S. Geological Survey)

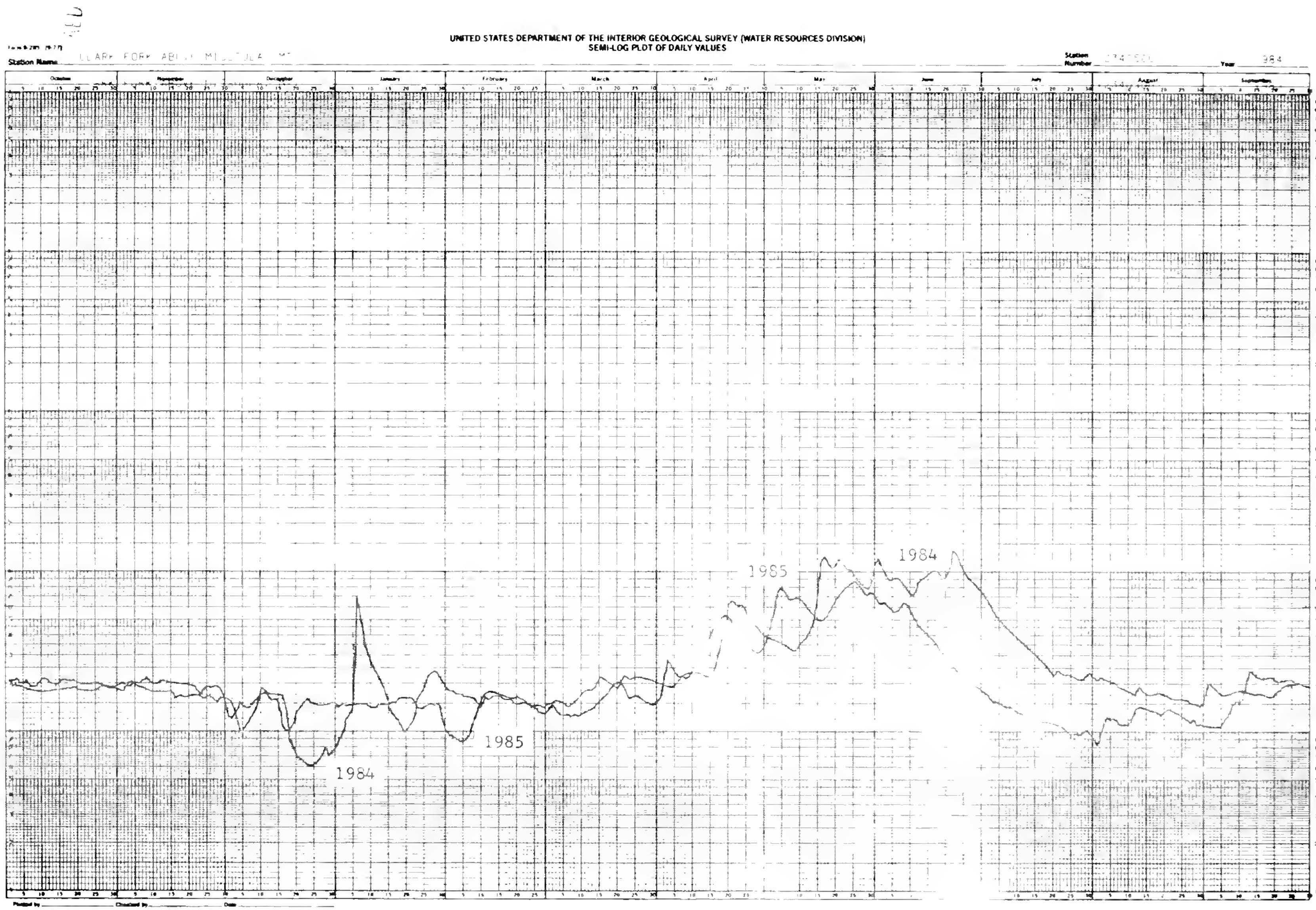
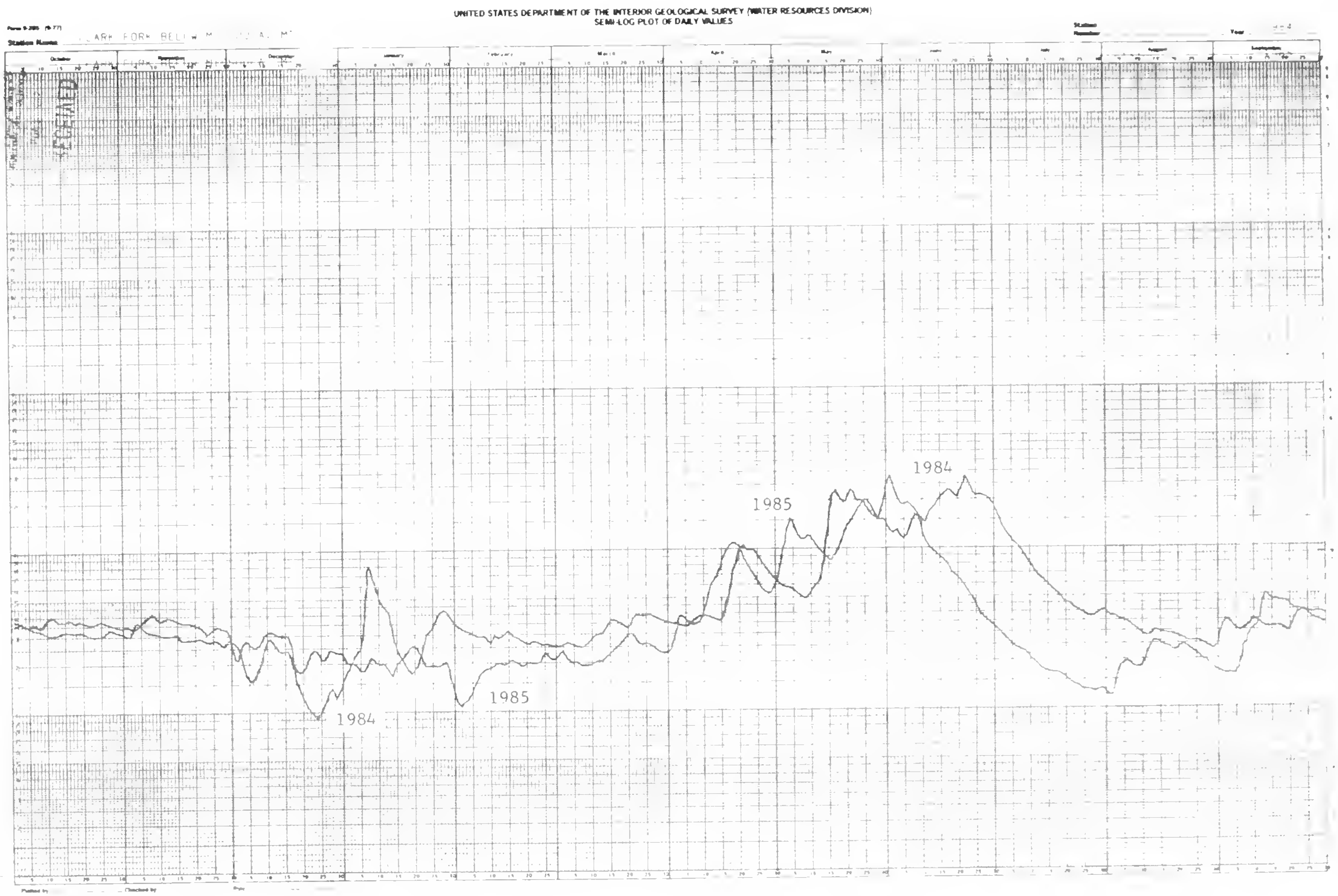


Figure 25. Hydrographs for Clark Fork below Missoula, Water Years 1984 and 1985
(Source: U.S. Geological Survey)



# APPENDICES

TRAVEL TIME CALCULATIONS.

The estimation of travel-times for the Clark Fork River from below Milltown dam to above Thompson Falls was done using a simple model. The model was developed by the following steps:

1. a field dye-study to measure travel-times for selected reaches;

2. comparison of the measured travel-times with ones calculated; and

3. development of a procedure for estimating travel-times at other flows and for other reaches of the river.

The field dye-study was performed on July 17-18, 1984. Rhodamine WT was injected at three locations and the travel-time over a total of about 86 river miles was measured. The arrival of the dye at various monitoring points along each of the reaches in the study was monitored using a fluorometer with a chart recorder. The quantity of dye to inject was calculated according to Hubbard, et. al.(1982) and was based on the maximum concentration of dye being 0.5 ppb at the end of the reach.

Pertinent data used for each of the reaches and the results of the study are given below. The river-mileages and elevation changes were estimated from USGS topographic maps. The mileages were compared with published values of U.S. EPA and the Montana Dept. of Natural Resources and Conservation and in some cases adjusted or remeasured until acceptable agreement was reached. The measured travel-times are the times to the peak concentration of dye at the monitoring point.

The flow at the time of the study was 4800 cfs as measured at the USGS guage below Missoula (below the confluence with the Bitterroot River). Flows for the reach through Missoula and the reach below St. Regis were estimated using regression equations. Since 1981 seemed to be a year with similar flow conditions, regressions were done using USGS daily flows at three stations for the period July 11-31, 1981 during which the flow varied from 6660 cfs to 3010 cfs at the station below Missoula. The resulting regression equations are:

Q(bel St Regis) = 1.26Q(bel Missoula) + 350 (r=.99)
Q(abv Missoula) = .466Q(bel Missoula) + 710 (r=.99)

where Q is flow at the indicated stations in cfs.

The flows at other locations were estimated using a rough extrapolation from the above three stations.

Injection 1:
Reserve St. Bridge to Harper Bridge: 12.8 river-miles; 97 foot elevation change; flow = 4800 cfs (2950 cfs (est) above the Bitterroot R.); measured travel-time = 5.9 hours; calculated river velocity = 2.25 mph.

Harper Bridge to Champion: 3.5 river-miles; 20 foot elevation change; flow = 4800 cfs (est); measured travel-time = 1.4 hours; calculated river velocity = 2.50 mph.

Champion to Huson: 8.8 river-miles; 48 foot elevation change; flow = 4800 cfs (est); measured travel-time = 3.5 hours; calculated river velocity = 2.43 mph.

Huson to Petty Creek: 10.5 river-miles; 35 foot elevation change; flow = 5200 cfs (est); measured travel-time = 4.9 hours; calculated river velocity = 2.14 mph.

Injection 2:

Petty Creek to Forest Grove: 24 river-miles; 217 foot elevation change; flow = 5400 cfs (est); measured travel-time = 10.5 hours; calculated river velocity = 2.29 mph.

Forest Grove to LaVista: 16.5 river-miles; 68 foot elevation change; flow = 6000 cfs (est); measured travel-time = 6.3 hours; calculated river velocity = 2.62 mph.

Injection 3:

Below St. Regis on highway 135 from mile-post 11 to mile-post 20.5: 10.4 river-miles; 55 foot elevation change; flow = 6400 cfs (est); measured travel-time = 4.2 hours; calculated river velocity = 2.48 mph.

Theoretical calculations of velocities of the river for each of the reaches were made using the equations of Boning (1974). He gives separate equations for "channel-controlled" reaches and for "pool and riffle" reaches. These equations are:

$$V_{cc} = 2.69(Q)^{0.26}(S)^{0.28} \quad \text{(channel-controlled)}$$

$$V_{pr} = 0.38(Q)^{0.40}(S)^{0.20} \quad \text{(pool and riffle)}$$

V is velocity in ft/sec, Q is discharge in cfs, and S is slope in ft/ft. V was converted to mph by multiplying by 0.682.

The results of the calculations were in good agreement with the results of the dye-study and for the most part the two velocities (channel-control and pool-riffle) calculated for each reach bracketed the measured velocity (see table below).

A model was then conceived that consisted of using the two equations above after determining for each reach whether the channel-control equation, the pool-riffle equation, or a combination of the two should be used. To carry this out

a calibration procedure was used in which a weighted-average of the channel-control and pool-riffle results was calculated for the flows at which the dye-study was carried out and the weighting factors were chosen so that the weighted-average equalled the measured velocity. Or in mathematical terms:

$$V_m = A(V_{cc}) + B(V_{pr})$$

$V_m$ is the measured velocity, $V_{cc}$ and $V_{pr}$ are the calculated channel-control and pool-riffle results, and A and B are the weighting factors.

The results are summarized in the following table.

| Reach | $V_m$ | $V_{cc}$ | $V_{pr}$ | Calc. A | Calc. B | Used A | Used B |
|---|---|---|---|---|---|---|---|
| Res. St-Harpers | 2.25 | 2.49 | 1.90 | .59 | .41 | .6 | .4 |
| Harpers-Champion | 2.50 | 2.46 | 1.96 | 1.08 | -.08 | 1.0 | 0.0 |
| Champion-Huson | 2.43 | 2.44 | 1.95 | .98 | .02 | 1.0 | 0.0 |
| Huson-Petty Cr | 2.14 | 2.15 | 1.82 | .97 | .03 | 1.0 | 0.0 |
| Petty Cr-F Grove | 2.29 | 2.86 | 2.24 | .08 | .92 | 0.0 | 1.0 |
| F Grove-LaVista | 2.62 | 2.48 | 2.07 | 1.34 | -.34 | 1.34 | -.34 |
| Hwy mile 11-20.5 | 2.48 | 2.62 | 2.21 | .66 | .34 | .66 | .34 |

A high value for A indicates that the reach has a predominately channel-control character, while a high value for B indicates a predominately pool-riffle character. The results seem fairly reasonable. The reach with the most channel-control character should probably be the Forest Grove to LaVista; the fact that A exceeds 1.0 and B is negative for this reach indicates that the river may flow abnormally fast through this stretch. The reach with the most pool-riffle character would certainly be Petty Cr. to Forest Grove, which includes Alberton Gorge.

The values for A and B were rounded off to the common fractions which are shown in the "Used" columns. The determination of travel-times at other flows was done by the following procedure:

1. divide the river from below Milltown to above Thompson Falls into reaches;

2. determine the flow at USGS gauge below Missoula;

3. estimate the flow for the other reaches;

4. calculate $V_{cc}$ and $V_{pr}$ for each reach followed by estimates of $V_m$ using the equations given above;

5. using the estimates of $V_m$ calculate the travel time for each reach and keep a cumulative total.

The table below gives the final results for three flows as measured at the USGS station below Missoula.

| Station (upper end of reach) | Mile | Slope Ft/Mi | 1500 cfs MPH | 1500 cfs Hour | 3000 cfs MPH | 3000 cfs Hour | 4000 cfs MPH | 4000 cfs Hour |
|---|---|---|---|---|---|---|---|---|
| Bel Milltown | 0 | 9.2 | 1.6 | 0 | 2.0 | 0 | 2.1 | 0 |
| Abv Missoula | 4 | " | " | 2.5 | " | 2.0 | " | 1.9 |
| Missoula STP | 7.5 | " | " | 4.7 | " | 3.8 | " | 3.6 |
| Shuffields | 9 | " | " | 5.6 | " | 4.5 | " | 4.3 |
| Bitterroot R | 11.5 | 5.6 | 1.8 | 7.2 | 2.2 | 5.8 | 2.3 | 5.5 |
| Harper Bridge | 20 | 5.7 | 1.8 | 11.9 | 2.2 | 9.5 | 2.3 | 9.1 |
| Champion | 23.5 | 5.6 | 1.8 | 13.9 | 2.2 | 11.1 | 2.3 | 10.6 |
| Huson | 32 | 2.5 | 1.4 | 18.6 | 1.7 | 15.0 | 1.9 | 14.3 |
| Ninemile | 38 | 4.0 | 1.7 | 22.9 | 2.0 | 18.5 | 2.2 | 17.5 |
| Abv Alberton | 43 | 10.3 | 1.5 | 25.8 | 1.9 | 21.0 | 2.1 | 19.7 |
| Tarkio | 62 | 3.9 | 1.3 | 38.5 | 2.2 | 31.0 | 2.3 | 28.8 |
| Lozeau | 71 | 3.0 | 1.8 | 45.[illegible] | 2.0 | 35.1 | 2.2 | 32.7 |
| Superior | 81 | 5.3 | 1.9 | 51.0 | 2.2 | 40.1 | 2.4 | 37.2 |
| St Regis | 97 | 5.4 | 1.8 | 59.4 | 2.1 | 47.3 | 2.3 | 43.9 |
| Abv Flathead | 120 | 3.5 | 2.4 | 72.2 | 2.7 | 58.3 | 2.9 | 53.9 |
| Plains | 130 | 2.3 | 2.1 | 76.4 | 2.4 | 62.0 | 2.6 | 57.4 |
| Abv T Falls | 145 | | | 83.5 | | 68.5 | | 63.1 |

For the synoptic sampling runs the "Hour" column in the above table was used to determine when to sample at each station. A "window" of + or - 5% of the cumulative hour was allowed. For example, at 3000 cfs the sampling schedule allowed for the station at Superior to be sampled anytime from 38.1 to 42.1 hours after the start of the sampling run below Milltown. Although an attempt was being made to track a slug of water, in actuality the slug disperses greatly as it moves downstream. This was noted in the dye-study and justifies the + or - 5% window.

REFERENCES:

Boning, Charles W., Generalization of Stream Travel Rates and Dispersion Characteristics from Time-of-Travel Measurements: Jour. Research U.S. Geol. Survey, Vol. 2, No. 4,pp. 495-9 (July - Aug., 1974).

Hubbard, E. P., F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr., Measurement of Time of Travel and Dispersion in Streams by Dye Tracing: U.S. Geol. Survey Techniques of Water-Resources Investigations, Book 3, Chap. A9, 44 p.

Montana Department of Health and Environmental Sciences

Chemistry Laboratory

## QUALITY ASSURANCE LIMITS

| | PRECISION | | ACCURACY | | DET. LIMIT |
|---|---|---|---|---|---|
| PARAMETER | RANGE (mg/l) | LIMIT (+ or -) | WARNING LIMITS (% Recovery) | ACCEPTANCE LIMITS (% Recovery) | (mg/l) |
| ACIDITY | | | | | |
| EPA 305.1 | 10 - 1000 | 10 | NOT AVAILABLE | | 10.0 |
| ALKALINITY | 10 - 70 | 2.0 | NOT AVAILABLE | | 10.0 |
| EPA 310.2 | 70 - 200 | 3.0 | | | |
| | 200 - 300 | 5.0 | | | |
| | 300 - 500 | 10. | | | |
| ALUMINUM | | | | | |
| | .1 - .6 | .27 | 80 - 123 | 69 - 134 | 0.1 |
| EPA 202.1 | .6 - 1.2 | .39 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | 0.3 |
| ANTIMONY | | | | | |
| EPA 204.1 | .2 - 15.0 | .2 | 90 - 110 | 85 - 115 | 0.2 |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .04 |
| ARSENIC | | | | | |
| | .001 - .005 | .002 | | | 0.001 |
| Automated | .005 - .020 | .003 | 93 - 125 | 85 - 133 | |
| Gaseous Hydride | .020 - .100 | .005 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 115 | .05 |
| BARIUM | | | | | |
| | 0.1 - 0.5 | .10 | | | 0.1 |
| EPA 208.1 | .5 - 1.5 | .20 | 84 - 107 | 79 - 112 | |
| | 1.5 - 5.0 | .50 | | | |
| EPA 200.7 | .005 - 0.50 | .003 | 93 - 107 | 89 - 111 | .005 |

| PARAMETER | PRECISION RANGE (mg/l) | PRECISION LIMIT (+ or -) | ACCURACY WARNING LIMITS (% Recovery) | ACCURACY ACCEPTANCE LIMITS (% Recovery) | DET. LIMIT (mg/l) |
|---|---|---|---|---|---|
| BERYLLIUM | | | | | |
| | .005 - .050 | .002 | 90 - 110 | 85 - 115 | .005 |
| EPA 210.1 | .050 - .250 | .004 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .001 |
| BIOCHEMICAL OXYGEN DEMAND | 2 - 10 | 2 | NOT AVAILABLE | | 2.0 |
| EPA 405.1 | 10 - 45 | 7 | | | |
| | 45 - 100 | 15 | | | |
| | 100 - 200 | 30 | | | |
| BORON | | | | | |
| | 0.10 - .50 | .10 | 90 - 110 | 85 - 115 | .10 |
| EPA 212.3 | .50 - .75 | .29 | | | |
| | .75 - 1.0 | .35 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .005 |
| CADMIUM | | | | | |
| | .001 - .02 | .005 | 90 - 109 | 86 - 113 | .005 |
| EPA 213.1 | .020 - .100 | .010 | | | |
| | .100 - .50 | .020 | | | |
| EPA 200.7 | .005 - .020 | .010 | 92 - 113 | 87 - 118 | .005 |
| CALCIUM | | | | | |
| | 1.00 - 50.0 | 2.8 | 87 - 110 | 81 - 115 | .01 |
| EPA 215.1 | 50.0 - 100.0 | 5.1 | | | |
| | 100 - 300 | 18.5 | | | |
| EPA 200.7 | 0.1 - 50.0 | 0.7 | 89 - 108 | 84 - 113 | 0.10 |
| | 50.0 - 100. | 1.4 | | | |
| CHEMICAL OXYGEN DEMAND | 5 - 50 | 4.2 | 90 - 110 | 85 - 115 | 5.0 |
| EPA 410. | 50 - 500 | 17.8 | | | |

| | PRECISION | | ACCURACY | | DET. LIMIT |
|---|---|---|---|---|---|
| PARAMETER | RANGE (mg/l) | LIMIT (+ or -) | WARNING LIMITS (% Recovery) | ACCEPTANCE LIMITS (% Recovery) | (mg/l) |
| CHLORIDE | 1 - 5 | .2 | 96 - 112 | 92 - 116 | 1.0 |
| EPA 325.2 | 5 - 25 | .4 | | | |
| | 25 - 50 | 1.4 | | | |
| | 50 - 100 | 2.6 | | | |
| CHROMIUM | | | | | |
| | .05 - .100 | .03 | 79 - 141 | 64 - 156 | .05 |
| EPA 218.1 | .100 - .500 | .13 | | | |
| EPA 200.7 | .02 - .10 | .02 | 90 - 112 | 85 - 117 | .02 |
| CHROMIUM, HEXAVALENT | .01 - .100 | .05 | 90 - 110 | 85 - 115 | .01 |
| EPA 218.5 | | | | | |
| COBALT | | | | | |
| | .05 - 1.00 | .05 | 90 - 110 | 85 - 115 | .05 |
| EPA 219.1 | 1.00 - 5.00 | .10 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .01 |
| COLOR | | | | | |
| EPA 110.1 | INSUFFICIENT DATA BASE | | NOT AVAILABLE | | 1.0 |
| COPPER | | | | | |
| | .01 - .05 | .01 | 94 - 115 | 88 - 121 | .01 |
| EPA 220.1 | .05 - .30 | .02 | | | |
| | .30 - 1.00 | .03 | | | |
| EPA 200.7 | .01 - .300 | .010 | 85 - 112 | 78 - 119 | .01 |
| CYANIDE | | | | | |
| | .001 - .100 | .005 | 90 - 110 | 115 - 85 | .001 |
| EPA 335.2 | .100 - .200 | .017 | | | |
| | .200 - .500 | .070 | | | |

| | PRECISION | | ACCURACY | | DET. LIMIT |
|---|---|---|---|---|---|
| PARAMETER | RANGE (mg/l) | LIMIT (+ or -) | WARNING LIMITS (% Recovery) | ACCEPTANCE LIMITS (% Recovery) | (mg/l) |
| FLUORIDE | | | | | |
| | .05 - .10 | .02 | 92 - 106 | 89 - 110 | .05 |
| EPA 340.3 | .10 - 1.00 | .05 | | | |
| | 1.00 - 1.50 | .07 | | | |
| | 1.50 - 2.00 | .10 | | | |
| HARDNESS | | | | | |
| | .05 - 15 | 1.1 | 87 - 110 | 82 - 114 | .05 |
| EPA 130.2 | 25 - 200 | 3.1 | | | |
| | 200 - 500 | 4.0 | | | |
| | 500 - 750 | 4.4 | | | |
| IRON | | | | | |
| | .01 - .20 | .02 | 85 - 117 | 76 - 125 | .01 |
| EPA 236.1 | .20 - .50 | .03 | | | |
| | .50 - 1.00 | .05 | | | |
| EPA 200.7 | .01 - .20 | .010 | 90 - 111 | 85 - 116 | .01 |
| | .20 - .50 | .020 | | | |
| | .50 - 1.0 | .050 | | | |
| LEAD | | | | | |
| | .05 - .10 | .05 | 87 - 113 | 80 - 120 | .05 |
| EPA 239.1 | .10 - .50 | .10 | | | |
| EPA 200.7 | .05 - .10 | .05 | 82 - 116 | 74 - 124 | .05 |
| LITHIUM | | | | | |
| ICP | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .005 |
| MAGNESIUM | | | | | |
| | 1.0 - 20.0 | 2.1 | 87 - 111 | 81 - 117 | .01 |
| EPA 242.1 | 20. - 50.0 | 4.6 | | | |
| | 50: - 100 | 9.6 | | | |

| | PRECISION | | ACCURACY | | DET. LIMIT |
|---|---|---|---|---|---|
| PARAMETER | RANGE (mg/l) | LIMIT (+ or -) | WARNING LIMITS (% Recovery) | ACCEPTANCE LIMITS (% Recovery) | (mg/l) |
| EPA 200.7 | .50 - 20.0 | .40 | 91 - 107 | 88 - 110 | .01 |
| | 20. - 100 | 1.8 | | | |
| MANGANESE | | | | | |
| | .01 - .04 | .01 | 91 - 109 | 87 - 113 | .01 |
| EPA 243.1 | .04 - .70 | .05 | | | |
| | .7 - 2.0 | .12 | | | |
| EPA 200.7 | .005 - .700 | .010 | 93 - 110 | 88 - 115 | .005 |
| MERCURY | | | | | |
| | .0002 - .0005 | .0002 | 87 - 119 | 78 - 128 | .0002 |
| EPA 245.1 | .0005 - .0100 | .0003 | | | |
| | .0100 - .0500 | .0007 | | | |
| ICP | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .05 |
| MOLYBDENUM | | | | | |
| | .1 - 1.50 | .10 | 90 - 110 | 85 - 115 | 0.10 |
| EPA 246.1 | 1.50 - 7.50 | .20 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .01 |
| NICKEL | | | | | |
| | .05 - .20 | .05 | 88 - 114 | 81 - 120 | .05 |
| EPA 249.1 | .20 - 1.0 | .06 | | | |
| | 1.0 - 5.0 | .12 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .02 |
| NITROGENS. | | | | | |
| AMMONIA | | | | | |
| | .01 - .10 | .01 | 78 - 122 | 67 - 133 | .01 |
| EPA 350.1 | .10 - 1.0 | .03 | | | |

| PARAMETER | PRECISION: RANGE (mg/l) | PRECISION: LIMIT (+ or -) | ACCURACY: WARNING LIMITS (% Recovery) | ACCURACY: ACCEPTANCE LIMITS (% Recovery) | DET. LIMIT (mg/l) |
|---|---|---|---|---|---|
| KJELDAHL | | | | | |
| | .10 - 1.0 | .22 | 77 - 137 | 62 - 152 | .10 |
| EPA 351.2 | 1.0 - 10. | .79 | | | |
| NITRATE + NITRITE | .01 - .10 | .01 | 87 - 119 | 79 - 127 | .01 |
| | .10 - .50 | .03 | | | |
| EPA 353.2 | .50 - 2.0 | .05 | | | |
| | 2.0 - 4.0 | .08 | | | |
| OIL & GREASE | INSUFFICIENT DATA BASE | | 92 - 99 | 90 - 101 | 1.0 |
| EPA 413.1 | | | | | |
| pH | 1 - 14 | .10 | NOT AVAILABLE | | x.xx |
| EPA 150.1 | | | | | |
| PHENOLICS | | | | | |
| | .001 - .010 | .003 | 90 - 110 | 85 - 115 | .001 |
| EPA 420.1 | .010 - .100 | .010 | | | |
| PHOSPHORUS: ORTHO PHOSPHATE | .001 - .010 | .003 | 88 - 110 | 83 - 115 | .001 |
| | .010 - .020 | .006 | | | |
| EPA 365.1 | .020 - .100 | .007 | | | |
| | .100 - 1.00 | .01 | | | |
| TOTAL PHOSPHORUS | | | | | |
| | .001 - .020 | .004 | 86 - 119 | 77 - 128 | .001 |
| | .020 - .10 | .020 | | | |
| EPA 365.1 | .10 - 1.00 | .06 | | | |

| PARAMETER | PRECISION RANGE (mg/l) | PRECISION LIMIT (+ or -) | ACCURACY WARNING LIMITS (% Recovery) | ACCURACY ACCEPTANCE LIMITS (% Recovery) | DET. LIMIT (mg/l) |
|---|---|---|---|---|---|
| POTASSIUM | | | | | |
| | .2 - .5 | .48 | 93 - 113 | 88 - 118 | |
| EPA 258.1 | .5 - 2.5 | .73 | | | .10 |
| | 2.5 - 6.0 | 2.2 | | | |
| | 6.0 - 15.0 | 4.9 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .2 |
| NON FILTERABLE RESIDUE (TSS) | 7 - 20 | 3.5 | NOT AVAILABLE | | |
| | 20.0 - 50.0 | 7.0 | | | |
| EPA 160.2 | 50.0 - 150.0 | 13.0 | | | |
| | 200 - 1000 | 34.0 | | | |
| SELENIUM | | | | | |
| | .002 - .010 | .002 | 79 - 115 | 70 - 124 | .002 |
| Automated | .010 - .020 | .004 | | | |
| Gaseous Hydride | .020 - .050 | .012 | | | |
| | .050 - .100 | .015 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .08 |
| SILICA | | | | | |
| ($SiO_2$) | 2.0 - 5.0 | .6 | 90 - 110 | 85 - 115 | 2.0 |
| EPA 370.1 | 5.0 - 15.0 | 1.5 | | | |
| | 15. - 30.0 | 2.0 | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .07 |
| SILVER | | | | | |
| | .01 - .05 | .01 | 90 - 104 | 86 - 108 | .01 |
| EPA 272.1 | .05 - .50 | INSUFFICIENT DATA BASE | | | |
| EPA 200.7 | .01 - .05 | .03 | 82 - 105 | 76 - 111 | .01 |

| PARAMETER | PRECISION RANGE (mg/l) | PRECISION LIMIT (+ or -) | ACCURACY WARNING LIMITS (% Recovery) | ACCURACY ACCEPTANCE LIMITS (% Recovery) | DET. LIMIT (mg/l) |
|---|---|---|---|---|---|
| SODIUM | | | | | |
| | 1.0 - 15.0 | 1.0 | 88 - 108 | 83 - 113 | .10 |
| Flame Emission | 15.0 - 100 | 3. | | | |
| S.M. 15th | 100 - 300 | 10. | | | |
| 325B | | | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .05 |
| SPECIFIC CONDUCTANCE | .10 - 75 | 11.7 | NOT AVAILABLE | | .10 |
| | 75 - 560 | 13.8 | | | |
| EPA 120.1 | 560 - 870 | 35.7 | | | |
| | 870 - 1500 | 64.2 | | | |
| STRONTIUM | | | | | |
| ICP | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .001 |
| SULFATE | | | | | |
| EPA 375.2 | 1.0 - 15.0 | 1.0 | 87 - 110 | 82 - 115 | |
| (low level) | 15.0 - 50.0 | 2.2 | | | |
| (high level) | 20 - 80 | 4.1 | | | 10.0 |
| | 80 - 130 | 5.9 | | | |
| | 130 - 300 | 15.3 | | | |
| SULFIDE | | | | | |
| EPA 376.1 | INSUFFICIENT DATA BASE | | 85 - 118 | 77 - 126 | .20 |
| THALLIUM | | | | | |
| EPA 200.7 | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .05 |

| PARAMETER | PRECISION RANGE (mg/l) | PRECISION LIMIT (+ or -) | ACCURACY WARNING LIMITS (% Recovery) | ACCURACY ACCEPTANCE LIMITS (% Recovery) | DET. LIMIT (mg/l) |
|---|---|---|---|---|---|
| TIN | | | | | |
| | 1.0 - 4.0 | .80 | 90 - 110 | 85 - 115 | .80 |
| EPA 282.2 | 4.0 - 60.0 | 1.50 | | | |
| ICP | INSUFFICIENT DATA BASE | | 90 - 110 | 85 - 115 | .03 |
| TURBIDITY | | | | | |
| | .10 - 1.0 | .2 | NOT AVAILABLE | | .02 |
| EPA 180.1 | 1.0 - 10.0 | .8 | | | |
| | 10.0 - 40.0 | 2.8 | | | |
| VANADIUM | | | | | |
| | .5 - 10.0 | .3 | 90 - 110 | 85 - 115 | .2 |
| EPA 286.1 | 10.0 - 50.0 | .6 | | | |
| EPA 200.7 | INSUFFICIENT DATE BASE | | 90 - 110 | 85 - 115 | .01 |
| ZINC | | | | | |
| | .005 - .030 | .004 | 94 - 113 | 89 - 118 | .005 |
| EPA 289.1 | .030 - .100 | .010 | | | |
| | .100 - .500 | .015 | | | |
| | .500 - 1.00 | .050 | | | |
| EPA 200.7 | .005 - .030 | .013 | 88 - 113 | 82 - 119 | .005 |
| | .030 - .100 | .039 | | | |

KK/war-53

Appendix B. Quality Assurance Limits for Carbon Furnace Metals Analyses Performed by Energy Labs, Inc.

## Detection Limits

| Metal | Detection Limit (μg/l) |
|---|---|
| Copper | 1 |
| Zinc | 0.05 |
| Lead | 1 |
| Cadmium | 0.1 |

## Achieved Laboratory Precision*

| Metal and Concentration Range (μg/l)** | Precision (+ or - μg/l) |
|---|---|
| Copper | |
| <1-25 (16) | 2.4 |
| 25-100 (3) | 5.4 |
| Zinc | |
| <.05-20 (4) | 1.1 |
| 20-100 (7) | 1.9 |
| Lead | |
| <1-25 (18) | 2.5 |
| 25-100 (1) | 39 |
| Cadmium | |
| <.1-5 (19) | 0.4 |
| 5-10 (0) | --- |

## Achieved Laboratory Accuracy*

| Metal** | Accuracy (%) |
|---|---|
| Copper (18) | 101±16 |
| Zinc (12) | 102±13 |
| Lead (18) | 104±17 |
| Cadmium (18) | 100±28 |

* Laboratory precision and accuracy computed for 3 standard deviations (99% confidence) using performing laboratory duplicate and spike sample analysis data and methods given in the Handbook for Analytical Quality Control in Water and Wastewater Laboratories, Chapter 6, EPA-600/4-79-019, March, 1979, U.S. EPA, Cincinnati, Ohio 45268.

** Value in parenthesis following each element is the actual number of paired duplicate or spiked sample analyses from which the corresponding precision or accuracy was computed.

# SAMPLE PRESERVATION

Complete and unequivocal preservation of samples, either domestic sewage, industrial wastes, or natural waters, is a practical impossibility. Regardless of the nature of the sample, complete stability for every constituent can never be achieved. At best, preservation techniques can only retard the chemical and biological changes that inevitably continue after the sample is removed from the parent source. The changes that take place in a sample are either chemical or biological. In the former case, certain changes occur in the chemical structure of the constituents that are a function of physical conditions. Metal cations may precipitate as hydroxides or form complexes with other constituents; cations or anions may change valence states under certain reducing or oxidizing conditions; other constituents may dissolve or volatilize with the passage of time. Metal cations may also adsorb onto surfaces (glass, plastic, quartz, etc.), such as, iron and lead. Biological changes taking place in a sample may change the valence of an element or a radical to a different valence. Soluble constituents may be converted to organically bound materials in cell structures, or cell lysis may result in release of cellular material into solution. The well known nitrogen and phosphorus cycles are examples of biological influence on sample composition. Therefore, as a general rule, it is best to analyze the samples as soon as possible after collection. This is especially true when the analyte concentration is expected to be in the low $\mu$g/l range.

Methods of preservation are relatively limited and are intended generally to (1) retard biological action, (2) retard hydrolysis of chemical compounds and complexes, (3) reduce volatility of constituents, and (4) reduce absorption effects. Preservation methods are generally limited to pH control, chemical addition, refrigeration, and freezing.

The recommended preservative for various constituents is given in Table 1. These choices are based on the accompanying references and on information supplied by various Quality Assurance Coordinators. As more data become available, these recommended holding times will be adjusted to reflect new information. Other information provided in the table is an estimation of the volume of sample required for the analysis, the suggested type of container, and the maximum recommended holding times for samples properly preserved.

## TABLE 1

## RECOMMENDATION FOR SAMPLING AND PRESERVATION OF SAMPLES ACCORDING TO MEASUREMENT[1]

| Measurement | Vol. Req. (ml) | Container[2] | Preservative[3,4] | Holding Time[5] |
|---|---|---|---|---|
| 100 Physical Properties | | | | |
| Color | 50 | P,G | Cool, 4°C | 48 Hrs. |
| Conductance | 100 | P,G | Cool, 4°C | 28 Days |
| Hardness | 100 | P,G | $HNO_3$ to $pH < 2$ | 6 Mos. |
| Odor | 200 | G only | Cool, 4°C | 24 Hrs. |
| pH | 25 | P,G | None Req. | Analyze Immediately |
| Residue | | | | |
| Filterable | 100 | P,G | Cool, 4°C | 7 Days |
| Non-Filterable | 100 | P,G | Cool, 4°C | 7 Days |
| Total | 100 | P,G | Cool, 4°C | 7 Days |
| Volatile | 100 | P,G | Cool, 4°C | 7 Days |
| Settleable Matter | 1000 | P,G | Cool, 4°C | 48 Hrs. |
| Temperature | 1000 | P,G | None Req. | Analyze Immediately |
| Turbidity | 100 | P,G | Cool, 4°C | 48 Hrs. |
| 200 Metals | | | | |
| Dissolved | 200 | P,G | Filter on site $HNO_3$ to $pH < 2$ | 6 Mos. |
| Suspended | 200 | | Filter on site | 6 Mos.[8] |
| Total | 100 | P,G | $HNO_3$ to $pH < 2$ | 6 Mos. |

## TABLE 1 (CONT)

| Measurement | Vol. Req. (ml) | Container[2] | Preservative[3,4] | Holding Time[5] |
|---|---|---|---|---|
| Chromium[+6] | 200 | P,G | Cool, 4°C | 24 Hrs. |
| Mercury | | | | |
| Dissolved | 100 | P,G | Filter<br>$HNO_3$ to pH $<2$ | 28 Days |
| Total | 100 | P,G | $HNO_3$ to pH $<2$ | 28 Days |
| 300 Inorganics, Non-Metallics | | | | |
| Acidity | 100 | P,G | Cool, 4°C | 14 Days |
| Alkalinity | 100 | P,G | Cool, 4°C | 14 Days |
| Bromide | 100 | P,G | None Req. | 28 Days |
| Chloride | 50 | P,G | None Req. | 28 Days |
| Chlorine | 200 | P,G | None Req. | Analyze Immediately |
| Cyanides | 500 | P,G | Cool, 4°C<br>NaOH to pH $>12$<br>0.6g ascorbic acid[6] | 14 Days[7] |
| Fluoride | 300 | P,G | None Req. | 28 Days |
| Iodide | 100 | P,G | Cool, 4°C | 24 Hrs. |
| Nitrogen | | | | |
| Ammonia | 400 | P,G | Cool,4°C<br>$H_2SO_4$ to pH $<2$ | 28 Days |
| Kjeldahl, Total | 500 | P,G | Cool, 4°C<br>$H_2SO_4$ to pH $<2$ | 28 Days |
| Nitrate plus Nitrite | 100 | P,G | Cool, 4°C<br>$H_2SO_4$ to pH $<2$ | 28 Days |
| Nitrate[9] | 100 | P,G | Cool, 4°C | 48 Hrs. |
| Nitrite | 50 | P,G | Cool, 4°C | 48 Hrs. |

## TABLE 1 (CONT)

| Measurement | Vol. Req. (ml) | Container[2] | Preservative[3,4] | Holding Time[5] |
|---|---|---|---|---|
| Dissolved Oxygen | | | | |
| Probe | 300 | G bottle and top | None Req. | Analyze Immediately |
| Winkler | 300 | G bottle and top | Fix on site and store in dark | 8 Hours |
| Phosphorus | | | | |
| Ortho-phosphate, Dissolved | 50 | P,G | Filter on site<br>Cool, 4°C | 48 Hrs. |
| Hydrolyzable | 50 | P,G | Cool, 4°C<br>$H_2SO_4$ to pH $<2$ | 28 Days |
| Total | 50 | P,G | Cool, 4°C<br>$H_2SO_4$ to pH $<2$ | 28 Days |
| Total, Dissolved | 50 | P,G | Filter on site<br>Cool, 4°C<br>$H_2SO_4$ to pH $<2$ | 24 Hrs. |
| Silica | 50 | P only | Cool, 4°C | 28 Days |
| Sulfate | 50 | P,G | Cool, 4°C | 28 Days |
| Sulfide | 500 | P,G | Cool, 4°C<br>add 2 ml zinc acetate plus NaOH to pH $>9$ | 7 Days |
| Sulfite | 50 | P,G | None Req. | Analyze Immediately |
| 400 Organics | | | | |
| BOD | 1000 | P,G | Cool, 4°C | 48 Hrs. |
| COD | 50 | P,G | Cool, 4°C<br>$H_2SO_4$ to pH $<2$ | 28 Days |
| Oil & Grease | 1000 | G only | Cool, 4°C<br>$H_2SO_4$ to pH $<2$ | 28 Days |
| Organic carbon | 25 | P,G | Cool, 4°C<br>$H_2SO_4$ or HCl to pH $<2$ | 28 Days |
| Phenolics | 500 | G only | Cool, 4°C<br>$H_2SO_4$ to pH $<2$ | 28 Days |

## TABLE 1 (CONT)

| Measurement | Vol. Req. (ml) | Container[2] | Preservative[3,4] | Holding Time[5] |
|---|---|---|---|---|
| **MBAS** | 250 | P,G | Cool, 4°C | 48 Hrs. |
| **NTA** | 50 | P,G | Cool, 4°C | 24 Hrs. |

1. More specific instructions for preservation and sampling are found with each procedure as detailed in this manual. A general discussion on sampling water and industrial wastewater may be found in ASTM, Part 31, p. 72–82 (1976) Method D-3370.

2. Plastic (P) or Glass (G). For metals, polyethylene with a polypropylene cap (no liner) is preferred.

3. Sample preservation should be performed immediately upon sample collection. For composite samples each aliquot should be preserved at the time of collection. When use of an automated sampler makes it impossible to preserve each aliquot, then samples may be preserved by maintaining at 4°C until compositing and sample splitting is completed.

4. When any sample is to be shipped by common carrier or sent through the United States Mails, it must comply with the Department of Transportation Hazardous Materials Regulations (49 CFR Part 172). The person offering such material for transportation is responsible for ensuring such compliance. For the preservation requirements of Table 1, the Office of Hazardous Materials, Materials Transportation Bureau, Department of Transportation has determined that the Hazardous Materials Regulations do not apply to the following materials: Hydrochloric acid (HCl) in water solutions at concentrations of 0.04% by weight or less (pH about 1.96 or greater); Nitric acid ($HNO_3$) in water solutions at concentrations of 0.15% by weight or less (pH about 1.62 or greater); Sulfuric acid ($H_2SO_4$) in water solutions at concentrations of 0.35% by weight or less (pH about 1.15 or greater); Sodium hydroxide (NaOH) in water solutions at concentrations of 0.080% by weight or less (pH about 12.30 or less).

5. Samples should be analyzed as soon as possible after collection. The times listed are the maximum times that samples may be held before analysis and still considered valid. Samples may be held for longer periods only if the permittee, or monitoring laboratory, has data on file to show that the specific types of sample under study are stable for the longer time, and has received a variance from the Regional Administrator. Some samples may not be stable for the maximum time period given in the table. A permittee, or monitoring laboratory, is obligated to hold the sample for a shorter time if knowledge exists to show this is necessary to maintain sample stability.

6. Should only be used in the presence of residual chlorine.

7. Maximum holding time is 24 hours when sulfide is present. Optionally, all samples may be tested with lead acetate paper before the pH adjustment in order to determine if sulfide is present. If sulfide is present, it can be removed by the addition of cadmium nitrate powder until a negative spot test is obtained. The sample is filtered and then NaOH is added to pH 12.

8. Samples should be filtered immediately on-site before adding preservative for dissolved metals.

9. For samples from non-chlorinated drinking water supplies conc. $H_2SO_4$ should be added to lower sample pH to less than 2. The sample should be analyzed before 14 days.

Appendix C. Scheme for Determining Streamflows at Shallow-water Monitoring Stations

| Station | Streamflow Determination Method* | Comments |
|---|---|---|
| 01 | Add flows measured by USGS at stations Clark Fork near Clinton and Rock Creek near Clinton. | Recorded as measured flow. |
| 02 | Monitoring station located at USGS station Blackfoot River near Bonner. | Recorded as measured flow. |
| 04 | USGS station Clark Fork above Missoula. | Recorded as measured flow. |
| 05 | Same as station 04. | Recorded as measured flow. |
| 06 | Same as station 04. | Estimate only. Does not include additions from Rattlesnake Creek or known losses to groundwater above this station. |
| 07 | WWTP flow recorder. | Recorded as measured flow. |
| 08 | USGS station Clark Fork above Missoula plus WWTP flow (rounded). | Estimate only for same reasons as station 06. |
| 09 | Same as station 08. | Estimate only. |
| 10 | Subtract flow at station 08 from flow at USGS station Clark Fork below Missoula. | Very rough estimate only. Maybe an underestimation due to overestimation of Station 08 flow. |
| 11 | USGS station Clark Fork below Missoula. | Recorded as measured flow. |
| 12 | Flowmeter(s) at Champion outfall(s). | Recorded as measured flow. |
| 13 | USGS station Clark Fork below Missoula plus Champion flow (rounded). | Recorded as estimate. |
| 14 | Same as station 13. | Estimate. |
| 15 | Same as station 13. | Estimate. |
| 16-20 | No flows recorded. | Estimate. |
| 21 | USGS station Clark Fork near St. Regis. | Recorded as measured flow. |
| 22 | Same as station 21. | Estimate. |
| 23 | Subtract flow at station 21 from flow at USGS station Clark Fork at Plains. | Estimate. |
| 24 | USGS station Clark Fork at Plains. | Recorded as measured flow. |
| 25 | Same as station 24. | Estimate. |

Appendix C. Continued

| Station | Streamflow Determination Method* | Comments |
|---|---|---|
| 27 | Add flow measured by MPC at Thompson Falls Dam to flow at USGS station Prospect Creek at Thompson Falls. | Recorded as measured flow. |
| 29 | USGS and WWP station Clark Fork below Noxon Rapids Dam. | Recorded as measured flow. |
| 31 | USGS station Clark Fork at Whitehorse Rapids. | Recorded as measured flow. |

LEACHABLE TEST:

1. Sediment was dried, rocks were removed, and a portion was ground with a mortar and pestle.

2. An amount close to 1.00 g was weighed out. The weight differed from 1.00 g by less than 1%.

3. The weighed portion was placed in a vessel along with 1 L of .5% $HNO_3$.

4. The vessel was shaken each day for 10 days.

5. On the 10th day, the liquid was decanted off and analyzed for metals on the ICP unit except for Arsenic which was analyzed by the Hydride meth d.

TOTAL TEST:

1. Same as Step 1 of LEACHABLE test.

2. Approximately .25 g was weighed out.

3. The weighed portion was placed in a Teflon digestion vessel along with 1.2 ml of conc. $HNO_3$ and 3.8 ml of conc. HCl.

4. The vessel was capped and microwaved for 3 minutes.

5. The contents of the vessel was diluted to 50 ml and analyzed for metals on the ICP unit except Arsenic.

6. Note that silica and metals bound in the silica may not be completely recorded by this procedure.

Appendix C. Description of method of Computing Time-Weighted Mean Dissolved Oxygen and Temperature.

The time-weighted dissolved oxygen and temperature values in Table 14 were computed as follows. For each station a 1-day period was chosen that centered around the approximate 1-day period over which the diurnal sampling was done. The time-weighted values were calculated by the following formula:

$V_{tw} = V_1(dT)_1 + V_2(dT)_2 + \ldots + V_n(dT)_n$, where

$V_1 \ldots V_n$ are the measured values of dissolved oxygen or temperature over the approximate 1-day period, and $(dT)_1 \ldots (dT)_n$ are the time intervals in days associated with each of the n samples.

The time interval for a given sample begins at the midpoint to the previous sample and ends at the midpoint to the next sample with two exceptions: the first time interval begins at the beginning of the chosen, exact 1-day period and the last time interval ends at the end of that period.

The time-weighted values are close approximations to those that would be obtained if samples were taken at exact, regular intervals and simply averaged without any weighting. Thus the weighting is done to compensate for the irregularity of the time intervals between samples.

Appendix C. Description of the Modified Traveling-Kicknet Macroinvertebrate Sampling Technique Used in the Lower Clark Fork Study

The technique used in this study for collection of benthic macroinvertebrate samples was a modification of a method described by Kinney et al (1977)[1]. An aquatic "D"-net (Ward's 10W0620) with a 36 centimeter (cm) long nylon net composed of 9 strands/cm (22 mesh) was used to collect untimed, approximately equal-surface area kick samples of Clark Fork mainstem and major tributary macrobenthos.

Samples were collected by holding the net at arms length in front of and downstream from the investigator while traveling slowly downstream and vigorously kicking and overturning the streambed material to a depth of several inches. The entire contents of the net were transferred to pint or quart glass jars, preserved in 70% ethanol and returned to the laboratory for sorting, organism counting and species identifications.

Five samplings were conducted at each of the shallow-water biological monitoring stations on a seasonal basis from March 1984 to August 1985. During the initial sampling (Spring 1984), only one sample was collected from each station. Approximately 4 square feet was disturbed in an area of moderately fast current (about 1.5 to 2.5 ft./sec.) followed by the disturbing of about two square feet in slow to moderate current (about 0.5-1.5 ft./sec.). The combined sampling constituted one sample; the net contents were transferred to the sample jar after each area had been sampled. Where possible, rich sites (those with piles of rocks providing a large area for colonization) were selected at each station. Riffles were selected for the moderately fast water samplings whenever available.

During subsequent seasonal samplings (summer, fall 1984; spring, summer 1985), four smaller surface area replicates were collected at each station in order to increase the statistical reliability of the data. Each replicate was collected by disturbing about two square feet in moderately fast current followed by about one square foot in slow to moderate current. Organisms were identified and counted in each replicate. However, for purposes of data analysis, results of the four replicates were pooled.

## References

1) Kinney, W.L. Pollard, J.E. and C.H. Hornig. In Press. Comparison of Macroinvertebrate Sample As They Apply to Streams of Semi-Arid Regions. Proceedings of the Fourth Joint Conference on Sensing of Environmental Pollutants, November 1988, New Orleans, LA 1977.

# METHODS OF COLLECTION AND ANALYSIS FOR PERIPHYTON AND PHYTOPLANKTON

## Natural Substrate Periphyton-Taxonomic Identification and Enumeration

### Sample Collection

Periphyton was collected from natural substrates with the object of obtaining a composite sample of algae roughly in the same proportion as they existed in the stream. Each type of substrate present (rocks, silt, woody material, higher aquatic plants) was sampled in proportion to its importance as a substrate at that site. Substrates exposed to different current velocities and depth (riffles or pools, for example) were sampled, again roughly in proportion to the extent these conditions prevailed at a site.

The collection procedure consisted of scraping the film of attached algae from the substrate with a knife blade or metal spoon. Green filaments and tufts of macroscopic algae and green or brown "slime" (composed largely of microscopic diatom algae) were sampled in proportion to their spatial extent on each substrate type. The periphyton material was composited into a small bottle containing stream water, preserved with several milliliters of Lugol's (IKI) and transported on ice to the laboratory. Samples were refrigerated until analyzed.

### Sample Analysis

Analyses consisted of identifying the taxa of soft-bodied (non-diatom) algae to the genus level, estimating the relative abundance and rank by volume of each taxon, and performing detailed taxonomic identifications and proportional counts of diatom algae to the species level.

To prepare a sample for identification of soft-bodied algae, the contents were emptied into a porcelain evaporating dish, and the periphyton material was teased apart with forceps and a disecting needle. Portions of conspicuous filamentous algae and other aggregations were placed on a welled microscope slide, along with 2-3 drops of non-descript periphyton "soup . The latter usually contained large numbers of microscopic soft-bodied and diatom algae. Again, a careful attempt was made to sub-sample each fraction in proportion to their importance in the original collection. A glass cover slip was placed over the material, and the slide preparation was thoroughly scanned under the microscope at 100X and 400X. Diatom algae were not identified at this time, and all taxa were considered collectively for estimating their numbers relative to other algae. Non-diatom algae were identified to genus, and the relative abundance of each was estimated using the following scheme:

R = rare; alga encountered very few times, $<5\%$ of fields examined.
C= common; alga encountered frequently, but present in no more than 25% of microscope fields examined.
VC = very common; alga encountered very frequently, present in up to 50% of microscope fields examined.
A = abundant; alga present in essentially 100% of fields examined, but usually makes up much less than half of the number of algae in a

given field.

VA = very abundant; alga present in essentially 100% of fields examined often accounting for half or more of the algae in a given field

VVA = very, very abundant; present in large numbers in 100% of fields examined, often comprising 80-90% of algae in a given field.

The latter category was generally applied to diatom algae, which were comprised of many genera and were often present in very large numbers and greatly dominated the total number of algae present.

The soft-bodied genera and the diatom assemblage were ranked numerically by estimating the volume they occupied in the sample. By this system it was possible for a very large filamentous alga, estimated as common, to "outrank" a single-celled form that was abundant, but had a much smaller collective volume.

After soft-bodied analyses were completed, the remainder of the sample was prepared for diatom taxonomy and proportional counts. Cleaning of the diatom material was accomplished with nitric acid and potassium dichromate (A.P.H.A. 1979), and a permanent diatom slide was prepared using Hyrax mounting medium (A.P.H.A. 1979).

Diatoms were scanned under oil immersion at a magnification of 1000X, and all taxa encountered were identified to at least the species level, if possible. A sufficient number of cells were scanned to be reasonably sure that the dominant taxa had been identified (up to one traverse of the cover slip). Between 300 and 450 diatom frustules were then counted, and the percent relative abundance of each taxon was calculated. The Shannon species diversity was calculated for each sample and taxa were ranked according to pollution tolerance by the system of Lange-Bertalot (1979).

## Natural Substrate Periphyton - Chlorophyll and Biomass Analyses

### Sample Collection

An attempt was made to choose similar conditions at each sample site, i.e. approximately the same substrate size, water depth and current velocity. Generally, large cobbles (15-25 cm in diameter) at 40-50 cm depth and 1-1.5 feet/second current velocity were sampled. These conditions were usually found 1-3 meters from the bank.

A representative rock was removed from the stream bottom, roughly maintaining its orientation. With a metal spatula or spoon, periphyton was scraped from the top surface of the rock and placed into a labeled 50 ml centrifuge tube, until a sample volume of 15 ml was obtained. A minimum amount of water was included with the periphyton material.

The centrifuge tube was then wrapped with aluminum foil to exclude light. Samples were kept on ice for the return trip to the lab, and were stored in the freezer until analyzed.

## Sample Analysis

### Chlorophyll

Samples to be analyzed were removed from the freezer and allowed to thaw. To each sample, 10 ml of 90% aqueous acetone solution was added, and the periphyton was thoroughly disrupted by grinding the material against the side of the tube with a glass stirring rod. An additional 20 ml of acetone solution was added and the tubes tightly capped. Samples were placed in a cold water sonic bath and sonified on high for 15 minutes. After steeping at 4°C for 24 hours, the sonification was repeated. Samples were clarified by centrifugation at 500G for 20 minutes. Chlorophyll measurements were made with a Perkin-Elmer Model 200 Spectrophotometer having a band width of 1 nm. The optical density (OD) of each sample solution was determined at 750, 664, 647, 630 and 430 nm, and after acidification at 665 nm.

Chlorophyll a was calculated using the following trichromatic equation after correcting the optical density values for turbidity (OD 750):

Chlorophyll a (mg/l) = 11.85(OD 664)-1.54(OD 647)-0.08 (OD 630)

The ratio of chlorophyll a to pheophytin a was calculated as the ratio of OD 664 to OD 665 according to Standard Methods (A.P.H.A. 1979).

The Stability Index, the ratio of yellow pigment (carotene) to green pigment (chlorophyll), was calculated as the ratio of OD 430 to OD 664.

### Biomass

After analyzing for chlorophyll, the periphyton material and acetone solution were emptied into a Vicor glass crucible, evaporated under a fume hood, and dried to constant weight at 105°C. Ash-free weight (biomass) was obtained according to Standard Methods (A.P.H.A. 1979).

The Autotrophic Index was calculated as the mass ratio of biomass to chlorophyll a.

## Artificial Substrate Periphyton - Chlorophyll and Biomass Analyses

### Sample Collection

The artificial substrates employed consisted of eight standard microscope slides held in commercial plastic carriages (Periphytometer II). Each carriage was tied to a cement cinder half-block, 8" x 16" x 4" thick. Five replicate substrates were placed at each of nine stream sites. The block/carriage unit was worked into the stream-bottom cobbles deep enough to place the slides slightly above the natural bottom, with their long axes parallel to the current. The water depth and current velocity were measured at each substrate. Placement locations were chosen and adjusted to achieve conditions that were as similar as possible between replicates and when practical between sites. Exposure time was approximately two weeks, but because of sampling logistics, ranged from 14.2 to 16.0 days. At the end of the exposure period the substrates and blocks were removed and the slides carefully removed as not to disturb the attached periphyton. Seven slides from each of the replicates at a site were placed in an opaque

plastic storage box and transported to the laboratory on ice. The slides were stored in a freezer until chlorophyll and biomass analyses were performed. The eighth slide from each replicate was placed in a 50 ml centrifuge tube, preserved with several drops of Lugols solution and stored for future taxonomical identifications.

Sample Analysis

Chlorophyll analyses were performed in the same manner as the natural substrate periphyton samples, with the following procedural exceptions. Slides were removed from the freezer immediately before beginning analyses, and were shielded from direct light and heat to minimize degradation of the chlorophyll. Periphyton from each seven-slide replicate was carefully and thoroughly scraped into a foil-covered beaker, then rinsed into 50 ml foil-covered centrifuge tubes with 25 ml of 90% acetone solution. Chlorophyll a concentration was calculated as milligrams/meter$^2$, and accrual as mg/m$^2$/day.

Biomass analyses were performed in the same manner as the natural substrate samples. Biomass was calculated as milligrams/meter$^2$ and accrual as mg/m$^2$/day.

Phytoplankton-Taxonomic Identification and Enumeration

Sample Collection

Single 250 ml grab samples from the surface (6-10 inches depth) were collected from each reservoir during the April, July and October, 1984 monitoring runs. The March, 1985 samples were euphotoic zone composites taken with a VanDorn water sampler at the surface, Secchi Disc depth and midway between. roughly equal volumes were composited from each depth. The July, 1985 samples were euphotic zone composites taken at the surface and Secchi Disc depth only. All samples were preserved with Lugols (IKI) and iced for transport to the laboratory. Samples were refrigerated until analyzed.

Sample Analysis

A Sedgwick-Rafter counting cell was employed for phytoplankton identification and enumeration according to Standard Methods (A.P.H.A. 1979). Scans and counts were performed at 200X. Algae were identified to genus when possible, and the distinction was made between viable and dead algae. For each genus, the number of cells per milliliter was calculated.

Phytoplankton - Chlorophyll Analyses

Sample Collection

Samples were collected in one gallon collapsible poly containers at the same time and by the same methods as samples for phytoplankton taxonomy and enumeration. They were transported to the laboratory on ice, and were stored in a freezer until analyzed.

Sample Analysis

The same methods were used to determine chlorophyll in phytoplankton as were used for periphyton, with the following variations. Samples were allowed to thaw at room temperature in the dark to minimize degradation of chlorophyll. A foil-wrapped glass Millipore filter holder and funnel with Whatman GF/C glass fiber filters were used to collect the phytoplankton. After thorough agitation, 250 ml aliquots of sample were filtered under vacuum until the filter clogged or the sample was consumed. The total volume filtered was recorded and the filter transferred to a foil-wrapped centrifuge tube. Because of generally low phytoplankton densities, a maximum of 15 ml of 90% acetone was added to minimize dilution of the chlorophyll. Each filter was thoroughly masticated and the samples prepared and analyzed according to the method described for natural substrate periphyton. Chlorophyll was calculated as milligrams per cubic meter.

References

American Public Health Association, et al. 1979. Standard methods for the Examination of Water and Wastewater. Fifteenth Edition. A.P.H.A., Washington, D.C. 1193 pages.

Lange-Bertalot, H. 1979. Pollution Tolerance of Diatoms as a Criterion for Water Quality Estimation. Nova Hedwigia, Beiheft 64, pp. 285-304.

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 3-5-84 | 01 | River clear. Heavy periphyton growth. | Cloudy, cool, 35°F. |
| 5 | 02 | River clear. | Cloudy, windy, cool. |
| 5 | 03 | Reservoir clear. | |
| 3-6-84 | 04 | Small patches of foam on river. | Clear.High of 45°F. |
| 6 | 05 | River bottom ice-scoured. Some foam. | |
| 6 | 06 | Traces of foam. | |
| 6 | 07 | Substantial foam on discharge. | |
| 6 | 08 | Moderate turbidity. Sewage odor. | |
| 6 | 09 | TSS noticeable. Numerous sloughing cutbanks above site. | |
| 3-5-84 | 10 | River clear. Patches of foam on river. Large accumulation near shore. | |
| 3-6-84 | 11 | Very hvy periphyton.Small patches of foam. | |
| 6 | 12 | Sampled Pond 9 outfall. $H_2S$ odor apparent. Ponds ice-covered. | |
| 6 | 13 | Heavy periphyton. High color in seepage areas near shore. | |
| 3-7-84 | 14 | Station not yet established. No samples. | Clear,sunny,warm. |
| 7 | 15 | Evidence of ice-scouring.Minor surface foam. | |
| 7 | 16 | Large accumulation of foam present. | |
| 7 | 17 | Heavy periphyton. | |
| 7 | 18 | Heavy periphyton. | |
| 7 | 19 | Heavy periphyton. Moderate turbidity due to algal particulate? | |
| 7 | 20 | Heavy periphyton.Slight to mod. turbidity. | |
| 3-8-84 | 21 | Above St. Regis River. Heavy periphyton. Patches of foam. | Clear, sunny. |
| 8 | 22 | Sizeable foam accumulations between 21 and 22. | |
| 8 | 23 | No foam. River clear. | Windy. |
| 8 | 24 | Hvy periphyton. Considerable organic TSS. | |
| 8 | 25 | Just above Thompson River. Traces of foam. | Cloudy,windy,cool. |
| 8 | 26 | Reservoir clear. | |
| 3-9-84 | 27 | Wet shoreline due to peaking or Noxon Reservoir drawdown. | Cloudy, cool, light rain. |
| 9 | 28 | Reservoir down 4 ft. Considerable TSS. | |
| 9 | 29 | River clr. Hvy periphyton.Traces of foam. | |
| 9 | 30 | Reservoir clear. | |
| | 31 | Station not yet established. No samples. | |

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 4-4-84 | 01 | Slight turbidity. River stage up. | Clear,sunny,warm. |
| 4 | 02 | Slight turbidity. | |
| 4 | 04 | Slight turbidity. Patches of foam. | |
| 4 | 06 | Slight turbidity. | |
| 4 | 07 | Discharge highly turbid, colored and foul smelling. | |
| 4 | 09 | Slight turbidity. | |
| 4 | 10 | River very clear. Foam accumulations present. | |
| 4 | 11 | River clear. | |
| 4 | 12 | Sampled Pond 9 outfall. Ice off ponds. | |
| 4 | 15 | Very slight turbidity. Small foam accumulation present. | |
| 4 | 21 | Site relocated below St. Regis River. River clear. | |
| 4 | 23 | Wave action causing turbidity. | Windy. |
| 4-5-84 | 25 | River clear. Site relocated several miles above Thompson R. | Cloudy,cool,rain last night. |
| 5 | 27 | River clear but with a greenish-murky cast in deep water. | |
| 4-6-84 | 29 | River clear. | |
| 6 | 31 | River clear. | |
| 4-17-84 | 01 | Runoff beginning. River turbid. | Weather hazy,unseasonably warm. High's 70-75°F. |
| 17 | 02 | River turbid. | |
| 17 | 04 | River quite turbid. Considerable TSS. | |
| 17 | 06 | River turbid. | |
| 17 | 07 | Discharge slightly more turbid than river. | |
| 17 | 09 | River turbid. | |
| 17 | 10 | River stage up only slightly but turbidity is high. Foam accumulations gone. | |
| 17 | 11 | River turbid. Trace of foam on river. | |
| 17 | 12 | Discharge sampled by M. Pasichnyk, Compliance Monitoring. | |
| 17 | 15 | River turbid. Noticeably high TSS. | |
| 17 | 21 | River less turbid than Station 15 but noticeable TSS. | |
| 17 | 23 | River low and clear. | Light rain. |
| 17 | 25 | River only slightly turbid but with noticeable TSS. | |
| 4-18-84 | 27 | River quite clear. | Cloudy, cool. Rain last night. |
| 18 | 29 | River clear. | |
| 18 | 31 | River clear. | |

Appendix D. Condensed Field Notes - Part I
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 5-16-84 | 01 | High flow. River highly turbid, chocolate milk-colored. Eroding banks. | Recent heavy rains Cloudy,cool,inter- mittent rain/sleet. |
| 16 | 02 | High flow. River turbid but less than Station 01. | |
| 16 | 04 | High flow. River up into willows. Highly turbid. | |
| 16 | 06 | River highly turbid.Much coarse debris. | |
| 16 | 07 | Effluent clearer than river. | |
| 16 | 09 | Highly turbid. Much coarse debris. | |
| 16 | 10 | High flow. River highly turbid, olive green-brown color. | |
| 16 | 11 | River turbid.Trees floating by.No foam. | |
| 16 | 12 | Discharge 001 has stronger odor than 003. | |
| 16 | 15 | River appears more turbid than Station 11. Foam present. | |
| 16 | 21 | St. Regis R. clear. Highly turbid here. | |
| 16 | 23 | River has a very slight turbidity. Milky green but not dirty. | |
| 5-17-84 | 25 | River highly turbid, much fine TSS. Thompson River clear. | Clear, sunny. |
| 17 | 27 | River turbid but less so than Station 25. | |
| 17 | 29 | River clear. Runoff has not yet purged lower river. | |
| 17 | 31 | River clear. Bull River clear. | |
| 6-4-84 | 01 | High flow.River turbidity less than 5-16-84. Eroding banks. | Cloudy, light rain. |
| 4 | 02 | High flow. Reduced turbidity. | |
| 4 | 04 | High flow. Reduced turbidity. Small patches of foam on river. | |
| 4 | 06 | High flow. Moderate turbidity. | |
| 4 | 07 | Effluent turbidity about same as river. | |
| 4 | 09 | Moderate turbidity. Eroding banks upstream. | |
| 4 | 10 | High flow, high turbidity. Large and small patches of foam on river. | |
| 4 | 11 | Moderate turbidity. | |
| 4 | 12 | Foam on river above and below discharges. | |
| 4 | 15 | Moderate turbidity. Numerous small patches of foam on river. | |
| 4 | 21 | St. Regis River clear.Mod. turbid here. | |
| 4 | 23 | Slightly turbid. Glacial flour green colored. | |
| 4 | 25 | Mod.to high turbidity.Much fine TSS. | |
| 6-5-84 | 27 | High turbidity, up from 5-17-84. | Partly cloudy. |
| 5 | 29 | Increased turbidity from 5-17-84. Large patches of foam present. (spilling at dam?) | |
| 5 | 31 | Increased turbidity. Large patches of foam present. (spilling at dam?) | |

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 6-20-84 | 01 | River high and turbid. | Partly cloudy, warm. |
| 20 | 02 | River high and turbid but beginning to clear. | |
| 20 | 04 | Moderately high turbidity. Small patches of foam. | |
| 20 | 06 | High turbidity, high TSS. Some foam. | |
| 20 | 07 | Effluent highly turbid. | |
| 20 | 09 | High turbidity and TSS. | |
| 20 | 10 | River is a turbid green color but beginning to clear. | |
| 20 | 11 | Moderately high turbidity. Small foam patches present. | |
| 20 | 12 | Nothing unusual. | |
| 20 | 15 | Mod. high turbidity like Station 11. Larger patches of foam present. | Rain showers. |
| 20 | 21 | Mod. turbidity & clearing. Foam traces. | |
| 20 | 23 | High flow, mod. greenish turbidity. | Wind, raining. |
| 20 | 25 | Moderate turbidity and clearing. | |
| 6-21-84 | 27 | Mod. turbidity. Coarse particulate debris present. | Heavy rain. |
| 21 | 29 | Mod. turbidity. TSS is fine clay. No foam. | |
| 21 | 31 | Mod. turbidity & clearing. Lge patches of white foam (spilling at dam?) | |
| 7-10-84 | 01 | Runoff subsiding. River clear. | Clear, sunny, warm. |
| 10 | 02 | River clear. | |
| 10 | 04 | River mod. turbid due to Milltown drawdown. Traces of foam. | |
| 10 | 06 | River mod. turbid & considerable TSS present due to Milltown drawdown. | |
| 10 | 07 | Effluent highly turbid. Aerator down 1 hr. after sampling & plant providing only primary treatment | |
| 10 | 09 | Slight turbidity. Traces of foam. | |
| 10 | 10 | River very clear. Only traces of foam. | |
| 10 | 11 | River clear. Traces of foam. | |
| 10 | 12 | Plant down for annual maint. since 6-26. Low discharge rate not typical. | |
| 10 | 15 | Slight turbidity. Noticeably more TSS than at Sta. 11. Large bulky patches of foam on river. | |
| 10 | 21 | River very clear but some fine TSS. | |
| 10 | 23 | River warm, low, turbid--soupy looking. | |
| 10 | 25 | River clear. | |
| 7-11-84 | 27 | Banks wet from peaking at dam? River cloudy with fine TSS. | Clear, sunny, warm. |
| 11 | 29 | River cloudy, soupy looking. | |
| 11 | 31 | Very slight cloudiness. No foam. | |

Appendix D. Condensed Field Notes - Part I
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 7-16-84 | 01 | River low and clear. | Clear,sunny,warm. |
| 16 | 02 | River low and clear. | |
| 16 | 04 | Milltown drawdown still in progress. River highly turbid. Much TSS. | |
| 16 | 06 | River highly turbid.Traces of foam. | |
| 16 | 07 | Aerator shaft repaired. Plant operating normally. | |
| 16 | 09 | River highly turbid but less than Station 06. | |
| 16 | 10 | River low and clear.Traces of foam. | |
| 16 | 11 | Moderately high turbidity. | |
| 16 | 12 | Plant back in operation. | |
| 16 | 15 | River highly turbid.Appreciable TSS.Large foam patches on river. | |
| 16 | 21 | River very clear. | |
| 16 | 23 | Very slight turbidity, soupiness. | |
| 16 | 25 | River very clear. No foam. | |
| 7-17-84 | 27 | River w/slight turb.,soupiness. | Clear,sunny,warm. |
| 17 | 29 | River low and clear. | |
| 17 | 31 | River low and clear. No foam. | |
| 8-14-84 | 01 | River low and clear. | Clear,sunny,warm. |
| 14 | 02 | River low and clear. | |
| 14 | 04 | Very slight turbidity.No foam. | |
| 14 | 06 | Very slight turb.Less than Sta.04 | |
| 14 | 07 | Effluent highly turbid & foamy. | |
| 14 | 09 | River clear. Traces of foam. | |
| 14 | 10 | River very low & clear. Minor accumulations of foam. | |
| 14 | 11 | River very low & clear.Foam traces. | |
| 14 | 12 | Nothing unusual. | |
| 14 | 15 | River clear but with noticeable TSS. Lge patches of foam on river. | |
| 14 | 21 | River very low & clear. Small patches of foam on river. | |
| 14 | 23 | River low & very slightly turbid. | |
| 14 | 25 | River low & clear. Foam traces. | |
| 8-15-84 | 27 | River low & very slightly turbid. | Clear,sunny,warm. |
| 15 | 29 | River low and clear. | |
| 15 | 31 | River low & clear.Small patches of foam on river. | |

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 7-30-84 | 01 | Slight turb.& river stage up due to recent rain.Good periphyton growth. | Heavy rain yesterday. Clr,sunny,warm today. |
| 30 | 02 | River clear. Apparently not influenced by rain. | |
| 30 | 03 | Slight cloudiness due to organic TSS. | |
| 30 | 04 | Very slight turbidity. Noticeable TSS. Traces of foam. | |
| 30 | 05 | River clear. | |
| 30 | 06 | River clear. | |
| 30 | 07 | Effluent turbid. | |
| 30 | 08 | Mod. turbidity due to WWTP discharge. Heavy periphyton. | |
| 30 | 09 | Slight turbidity.Heavy periphyton. | |
| 30 | 10 | River very clear. Foam accumulations present. | |
| 30 | 11 | Heavy periphyton growth. | |
| 30 | 12 | Nothing unusual. | |
| 30 | 13 | Sizeable patches of foam on river.Good periphyton growth. | |
| 7-31-84 | 14 | Sizeable patches of foam near right bank. Considerable TSS & slight to moderate turbidity. | Mostly clear,warm. |
| 31 | 15 | Slight to moderate turbidity. | |
| 31 | 16 | Mod.turbidity.Noticeable TSS. Numerous large foam patches. | |
| 31 | 17 | Slight turbidity.Noticeable TSS. | |
| 31 | 18 | River clearer than upstream stations. Foam on river & accumulations nr.shore. | |
| 31 | 19 | Slight turbidity & some TSS. | |
| 8-01-84 | 20 | Slight turb.Noticeable organic TSS. | Cloudy, cooler |
| 01 | 21 | River clear. | |
| 01 | 22 | River clear but w/organic TSS. | |
| 01 | 23 | Slight turbidity, cloudiness. | Rain shower. |
| 01 | 24 | Slight turbidity.Medium-sized patches of foam on river. | |
| 01 | 25 | Slight turbidity. Traces of foam. | |
| 01 | 26 | Slight turbidity. | |
| 8-02-84 | 27 | Slight turbidity. | Partly cloudy,warm. |
| 02 | 28 | Reservoir clear. | |
| 02 | 29 | River clear. | |
| 02 | 30 | River clear. | Light rain. |
| 02 | 31 | River clear. | |

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 9-13-84 | 01 | River low & clear. Foam accumulations present. | Clear & cool No recent rain. |
| 13 | 02 | River low & clear. Foam accumulations present. | |
| 13 | 04 | River clear but with fine TSS particles.Small foam patches on river. | |
| 13 | 06 | Slight turbidity. No foam. | |
| 13 | 07 | Effluent slightly turbid & foamy. | |
| 13 | 09 | Slight turb.Small foam patches midstream. | |
| 13 | 10 | River low & clear. Large foam accumulations present. | |
| 13 | 11 | Slight turbidity. Traces of foam. | |
| 13 | 12 | Nothing unusual. | |
| 13 | 15 | River clear. Traces of foam. | |
| 13 | 21 | River clear but with noticeable fine TSS. Traces of foam. | |
| 13 | 23 | River clear.Banks wet due to peaking at Kerr Dam? | |
| 13 | 25 | River clear. Minute traces of foam. | |
| 9-14-85 | 27 | River clear. No foam. | Frost last night. Cool & foggy. |
| 14 | 29 | Slight turbidity, soupiness. | |
| 14 | 31 | River clear. | |
| 10-15-84 | 01 | River mod.low & clear. Small patches of foam on river. | Cloudy,cool w/major snow & rain. |
| 15 | 02 | River clear & low.Numerous small patches of foam on river. | |
| 15 | 04 | River clear, noticeable fine TSS. Numerous small patches of foam. | |
| 15 | 06 | River clear.Small foam patches present. | |
| 15 | 07 | Effluent moderately turbid. | |
| 15 | 09 | Traces of foam. | |
| 15 | 10 | River very clear. Large foam accumulations present. | |
| 15 | 11 | Numerous small patches of foam. | |
| 15 | 12 | Nothing unusual. | |
| 15 | 15 | Slight turbidity,more so than Sta.11 Large patches of foam mid-river. | |
| 15 | 21 | River very clear.Traces of foam. Several large accumulations of foam between Stations 21 & 22. | |
| 15 | 23 | River very clear. | |
| 10-16-84 | 25 | River clear. | Partly cloudy,cool,dry |
| 16 | 27 | River clear.Pine pollen on surface. | |
| 16 | 29 | River low and very clear. | |
| 16 | 31 | River stage up and very clear. | |

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 10-29-84 | 01 | River stage up but very clear. Heavy periphyton growth. Numerous small patches of foam. | Cloudy,cool,windy, snowing. |
| 29 | 02 | River low & clear.Numerous pine needles on river. A few small patches of foam. | |
| 29 | 03 | Reservoir slightly to mod. turbid. | |
| 29 | 04 | River clear but w/lots of floating debris.Mod.amt.small foam patches. | |
| 29 | 05 | River up & clear.Traces of foam. Heavy periphyton growth. | |
| 29 | 06 | River clear. Traces of foam. Found dead rainbow trout along shore. | |
| 29 | 07 | Effluent highly turbid & very foamy. | |
| 29 | 08 | Very heavy periphyton growth. River very turbid. Sewage odor present. Little or no foam. | |
| 29 | 09 | River clear.Small foam patches present. Very heavy periphyton growth. | |
| 29 | 10 | River clr.Lge.accumulation of foam. | Clearing & cold. |
| 29 | 11 | River clr.Heavy periphyton growth. Mod. large patches of foam on river. Whitefish spawning. | |
| 29 | 12 | Nothing unusual. | |
| 10-30-84 | 13 | Heavy foam on river & in Marcure Slough.River bottom along right bank is stained.Seepage areas visible by high color.Heavy periphyton. | Cloudy, cool, snow in mountains |
| 30 | 14 | Very slight turbidity. Numerous large patches of foam. | |
| 30 | 15 | Very slight turbidity.Large patches of foam on river. | |
| 30 | 16 | Slight turbidity.Numerous large patches of foam on river & large accumulations along shoreline. | |
| 30 | 17 | Numerous lge.patches of foam on river & lge accumulations along shoreline. | |
| 30 | 18 | River clear. | Snowing heavily. |
| 30 | 19 | River clear. Med-sized foam patches. | |
| 10-31-84 | 20 | River clear.Traces of foam at most. | Clear, cold. |
| 31 | 21 | Water clr. Med-sized patches of foam. | |
| 31 | 22 | Slight turbidity. Traces of foam. | |
| 11-01-84 | 23 | Slight turbidity in part due to wave action. | Windy, cold. |
| 01 | 24 | River clr.Foam traces.Heavy periphyton. | |
| 10-31-84 | 25 | River clr. Accumulation of dirty foam in backwater. | |
| 31 | 26 | Reservoir clear. | |
| 11-01-84 | 27 | River low. | Cloudy,cold, snowing heavily. |
| 01 | 28 | Reservoir clear. | |
| 01 | 29 | River low & clear. | |
| 01 | 30 | Reservoir slightly cloudy.Heavy wave action.Row white foam out from right bank. | |
| 01 | 31 | River very low and clear. | |

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 12-10-84 | 01 | River slightly turb. Shelf ice restricting channel. Snow & ice floating down river. | Cloudy, rain/snow, fog, 37°F. |
| 10 | 02 | River below station under 80% ice cover. Station open, water clear. Slush ice present. | |
| 10 | 04 | River open blw dam & slightly turbid. | |
| 12-11-84 | 06 | River clr. Slush ice present. Some shelf ice. | Clear & cold. |
| 11 | 07 | Effluent moderately turbid. | |
| 11 | 09 | River clear. Some slush & shelf ice. | |
| 12-10-84 | 10 | River clr, mostly open. Ice coming down river. Foam accumulation present. | |
| 12-11-84 | 11 | Large algal particles in river & in samples. Numerous small foam patches. | |
| 11 | 12 | Champion ponds under ice cover. | |
| 11 | 15 | River clear but large algal TSS particles in river & in samples. Large patches of foam on river. | |
| 11 | 20 | River clear & less algal debris. Much slush ice. | |
| 11 | 21 | River clr w/some algal debris. Slush ice. | |
| 11 | 22 | River clr w/some algal debris. River open here but frozen across upstream. | |
| 11 | 23 | River clear, open, no slush ice. | |
| 12-12-84 | 25 | River clear. Minimal algal debris. | Cloudy, cool, snowing. |
| 12 | 27 | River high (due to peaking?) & clear. | |
| 12 | 29 | River clr. Half of reservoir under ice. | |
| 12 | 31 | Wet banks, no shoreline ice. River clr. | |
| 1-14-85 | 01 | River very clear. Channel restricted by shelf ice. | Cloudy, cool. |
| 1-14-85 | 02 | River below station under 100% ice cover. Open at station. River clr. Lots of slush ice. | |
| 14 | 04 | River open, clear, some slush ice. | |
| 14 | 06 | River clear. Shelf ice well out into channel & slush ice plentiful. | |
| 14 | 07 | Effluent moderately to highly turbid. | |
| 14 | 09 | River clear, under 90% ice cover. | |
| 14 | 10 | River froze over at Maclay Bridge. River mostly clear but anchor ice sloughing increases TSS. No foam. | |
| 14 | 11 | River clr & open. Noticeable algal particulate. | |
| 14 | 12 | No surface discharge. Sampled pond 12 outfall. | |
| 14 | 15 | River clear but algal particulate present. Channel open but lots of slush ice. No foam. | |
| 1-15-85 | 21 | River clear & very low. | Cloudy, warmer |
| 15 | 23 | River clear & moderately high. Ice jams along shoreline. | |
| 15 | 25 | River very clear. | Windy. |
| 15 | 27 | Reservoir under ice. River clear. | |
| 15 | 29 | River clear. | |
| 15 | 31 | River clear and low. Most of Cabinet Gorge Reservoir ice-free. | |

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 02-13-85 | 01 | Very slight turb.Snow & ice 4 feet deep along banks. | Partly cloudy,cool. Recent heavy snow. |
| 13 | 02 | River clr & under 85% ice cover. | |
| 13 | 04 | River clr but w/some algal particulate. Shelf ice prevalent. | |
| 13 | 06 | River clear. Much shelf ice. | |
| 13 | 07 | Effluent mod.to highly turbid. | |
| 13 | 09 | River clear & under 85% ice cover. | Warming |
| 13 | 10 | River very clear & mostly ice free. | |
| 13 | 11 | River clear but w/substantial amount of algal particulate. | |
| 13 | 12 | No direct discharge.Sampled Pond 12 overflow. Ponds under ice. | |
| 13 | 15 | Much algal particulate. River channel 95% ice covered. | |
| 02-14-85 | 21 | River clr.w/lots of slush ice. Sampled several miles below reg. site due to 100% ice cover there. | Clear & above freezing. |
| 14 | 23 | River very clr & under 100% ice cover. Sampled several mi.upstream in open area. | |
| 14 | 25 | River very clr & under 90% ice cover. | |
| 14 | 27 | River very clr & under 90% ice cover. | |
| 14 | 29 | River open and very clear. | |
| 14 | 31 | River very clr,very low & channel ice free. | |
| 04-10-85 | 01 | River mod. turb.Numerous small foam patches. | Clear,sunny. Highs in 70's |
| 10 | 02 | River mod.turb.Mod.amt of small patches of foam. Much sloughing algal particulate in water column. | |
| 10 | 04 | River mod.turb. Numerous small foam patches. | |
| 10 | 06 | River mod.turb. but less so than Sta.04. Foam still present. | |
| 10 | 07 | Effluent w/only a very slight turb. Clearer than the river. | |
| 10 | 09 | River w/mod.turb.Traces of foam. | |
| 10 | 10 | Slight to mod.turb. w/fine TSS. Traces of foam but no accumulations. | |
| 10 | 11 | River mod.turb. Moderate amount of small patches of foam. | |
| 10 | 12 | Ponds ice free.Effluent looks typical. | |
| 10 | 15 | River mod.turbid w/considerable TSS. Mod.amt.lge,lofty patches of foam. | |
| 10 | 21 | River mod.turb.Lge.amt.of algal particulate. No foam on river;noticed sm. accum. nr.shore. | |
| 10 | 23 | River low & clr. No foam present. | |
| 10 | 25 | Slightly turb.& appears low.Exposed bars & shoreline. | |
| 10 | 27 | River low and clear. | |
| 10 | 29 | River clr.No foam.Most of ice off reservoir. Reservoir still drawn down but clear now. | |
| 10 | 31 | Very clear.No visible TSS or foam. Most ice off reservoir. | |

Appendix D. Condensed Field Notes - Part 1

Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 03-18-85 | 01 | Lowland snowmelt runoff. River stage up & highly turbid. Traces of foam. | Clear, windy, warm. High's in 50's. |
| 18 | 02 | Stage not up like Sta. 01 but highly turbid. Lots of algal particulate & TSS. | |
| 18 | 03 | Reservoir very turb. Clark Fork arm ice free. Blackfoot arm under ice. | |
| 18 | 04 | River highly turb. w/considerable TSS including scoured algal particulate. | |
| 18 | 05 | Mod. high turb. appears less than Sta. 04. | |
| 18 | 06 | High turbidity with considerable TSS, sloughing algae. | |
| 18 | 07 | Effluent only slightly turb. River mostly ice-free. | |
| 18 | 08 | High turb. in plume of WWTP discharge. No apparent odor. Heavy periphyton. Dead sucker near shore. | |
| 18 | 09 | River mod. turb. Foam traces. Hvy periphyton growth. | |
| 18 | 10 | River very clear. Small patches of foam on river & accumulation along shoreline. | |
| 18 | 11 | Turbid with lots of TSS. Heavy periphyton. Traces of foam. | |
| 18 | 12 | Ponds under ice. Effluent typical looking and smelling. | |
| 18 | 13 | River appears turb. & colored by flashlight. Lge patches lofty foam. | |
| 03-19-85 | 14 | River turb. Lge patches lofty foam. | Clear, warm. |
| 19 | 15 | River appears turb. & colored by flashlight. Less foam than Sta. 14 | |
| 19 | 16 | River quite turb. Lots of TSS. Large patches foam on river & accumulating near shore. Foam here very unaesthetic. | |
| 19 | 17 | River turb. w/lots of algal particulate. Appreciable foam. | |
| 19 | 18 | River turbid. Snow & ice along shore. | |
| 19 | 19 | River mod. turb. Heavy periphyton. Small patches of foam on river. | |
| 03-20-85 | 20 | Moderate turbidity & TSS. | Cldy, cool, rain shwrs. |
| 20 | 21 | River highly turb. w/lots of TSS. Foam accum. along shore between here & Sta. 22 | |
| 20 | 22 | Moderately turbid. High TSS. | |
| 20 | 23 | River stage low. High glacial flour green turbidity. Shoreline ice free. | |
| 20 | 24 | River stage down (wet shoreline), turbid. Lots of TSS. Heavy periphyton. | |
| 20 | 25 | River off color, turbid & Flathead green-tinted. Heavy periphyton. | |
| 20 | 26 | Reservoir turbid & green-tinted. | |
| 20 | 27 | River turbid & stage 8-10 ft. low. Moderate amt of medium-sized patches of foam. | |
| 03-21-85 | 28 | Reservoir drawndown 15 or more feet. Water very turbid & murky green. | Cloudy, cool, snow. |
| 21 | 29 | River clear. | |
| 21 | 30 | Reservoir clr w/green color. Reservoir ice-free. | |
| 21 | 31 | River clear. | |

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 04-23-85 | 01 | River moderately turbid. | Cloudy,cool,snowing. |
| 23 | 02 | River slightly turbid & stage up. | |
| 23 | 04 | River moderately turbid. Numerous small patches of foam. | |
| 23 | 06 | River moderately turbid. Stage up. No foam. | |
| 23 | 07 | Effluent slightly turbid. Clearer than river. | |
| 23 | 09 | River moderately turbid. No foam. | |
| 23 | 10 | River slightly turbid.Stage up.Traces of foam on river but no accumulations along shore. | |
| 23 | 11 | River only slightly turb.No significant foam. | |
| 23 | 12 | Nothing unusual. | |
| 23 | 15 | Considerable TSS, more than at Station 11. Considerable large,lofty patches of foam. | |
| 23 | 21 | River mod. turb.Numerous small patches foam & several accumulations.St.Regis R. clear. | |
| 23 | 23 | River cloudy green, moderately turbid. | |
| 23 | 25 | Slight to mod. turb. Moderate sized patches of foam on river. | |
| 23 | 27 | River only very slightly turbid. Stage very low due to Noxon drawdown. No foam. | |
| 04-24-85 | 29 | River very slightly turbid. Noxon Reservoir drawn down 30 feet. | Cloudy,cool,humid. Hvy snow/rain lastnight |
| 24 | 31 | River very slightly turbid.Traces of foam. | |
| 05-08-85 | 01 | Spring runoff occurring. River moderately Medium-sized patches of foam. | Cloudy,warm,rainshwrs. High near 70°F. |
| 8 | 02 | River turbid. No appreciable foam. | |
| 8 | 04 | River mod. turbid. Small patches of foam. | |
| 8 | 06 | River moderately turbid. Traces of foam. | |
| 8 | 07 | Effluent very highly turb,colored & foamy. | |
| 8 | 09 | River bank-full and roily. | |
| 8 | 10 | River slightly turbid.Small patches of foam on river but no accumulations. | |
| 8 | 11 | River moderately turbid. Traces of foam. | |
| 8 | 12 | Pond levels low.Surface disch.typical looking. | |
| 8 | 15 | River moderately turbid. Some large patches of foam on river. | |
| 8 | 21 | River w/slight to mod. turbidity & bank-full. Traces of foam. St.Regis R. up but clear. | |
| 8 | 23 | Very slight turbidity. Stage up. | |
| 8 | 25 | Slight to moderate turbidity. No foam. | |
| 8 | 27 | River mod.turbid & stage back up but still below normal. Intermittent large patches of lofty white foam (spilling at dam?). | |
| 05-09-85 | 29 | Very slight turbidity. | Clear, sunny & warm. |
| 9 | 31 | Slight turbid. Some foam (spilling at dam?). | |

Appendix D. Condensed Field Notes - Part I
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 05-22-85 | 01 | River stage up considerably. Slight turbidity. | Clear, sunny, warm. High's near 80°F. |
| 22 | 02 | River stage up & very turbid. Reddish-brown colored. | |
| 22 | 04 | River very turbid. | |
| 22 | 06 | River very turbid & stage up. | |
| 22 | 07 | Effluent very highly turbid, colored and foamy. | |
| 22 | 09 | River very turbid. | |
| 22 | 10 | River mod. turbid.Brownish-green colored. Lots of floating debris. | |
| 22 | 11 | River stage up & turb. Traces of foam. | |
| 22 | 12 | Effluent typical looking. Ponds are low. | |
| 22 | 15 | River mod. turbid. Lots of fine TSS. Minimal foam on river. | |
| 22 | 21 | River moderately turbid. Noticeable TSS. | |
| 22 | 23 | River stage up into the willows & only slightly turbid. | |
| 22 | 25 | River stage high & with a mod. turbidity. | |
| 22 | 27 | River mod.turbid. Stage near normal. | |
| 05-23-85 | 29 | River only slightly turbid. Noxon Rapids Reservoir still down about 5 feet. | Clear, sunny, warm. |
| 23 | 31 | River clear. Stage low. | |
| 06-05-85 | 01 | River slightly turbid.Stage decreasing. Numerous small patches of foam. A small accumulation behind a point bar. | Cloudy, cool, rain showers. |
| 5 | 02 | River stage dropping. Moderate turbidity. Reddish-brown color gone. | |
| 5 | 04 | Moderate turbid. Numerous small patches of foam. | |
| 5 | 06 | Moderate turbidity. Traces of foam. | |
| 5 | 07 | Effluent appearance improved but foamy. Construction of new clarifier begun. | |
| 5 | 09 | Moderate turbidity. Stage declining. | |
| 5 | 10 | Slight turbidity. Stage declining. Small patches of foam on river but no accumulations. | |
| 5 | 11 | River moderately turbid. Traces of foam. | |
| 5 | 12 | Effluent typical-looking.Mill down for maint. | |
| 5 | 15 | Mod.turb. Line of large lofty foam patches midriver. | |
| 5 | 21 | River slightly to moderately turbid. | |
| 5 | 23 | Moderate turbidity. Stage up. | |
| 5 | 25 | River slightly to moderately turbid. | |
| 06-06-85 | 27 | River stage up. Moderately to highly turbid. Lofty patches of foam near left bank (spilling at dam?). | Cloudy, cool, heavy rain. |
| 6 | 29 | River moderately turbid. Noxon Reservoir stage normal. | |
| 6 | 31 | Slight turbidity. Stage up. | |

Appendix D. Condensed Field Notes - Part 1
Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 06-18-85 | 01 | River stage declining. Very slight turbidity. Cladophora blooming. | Clear, sunny, hot. High's in 90's °F. |
| 18 | 02 | River stage declining & clearing. Slight turbidity. | |
| 18 | 04 | Milltown drawdown underway. Slight to moderate turbidity. | |
| 18 | 06 | Slight turbidity. Little or no foam. | |
| 18 | 07 | Effluent only slightly turbid. Some foam. | |
| 18 | 09 | Slight turbidity. Traces of foam. | |
| 18 | 10 | River clear but with some algal TSS. Considerable number of small foam patches on river but no accumulations. | |
| 18 | 11 | River clear. Small patches of foam. | |
| 18 | 12 | Effluent typical-looking. | |
| 18 | 15 | River clear. Noticeable TSS & lofty foam. | |
| 06-19-85 | 21 | Very slight turbidity. | Clear, sunny, hot. |
| 19 | 23 | River stage up. Mod. turbidity & TSS. | |
| 19 | 25 | Slight turbidity. Traces of foam. | |
| 19 | 27 | River moderately turbid.Considerable amount of coarse organic TSS. Traces of foam. | |
| 19 | 29 | Slight turbidity. | |
| 19 | 31 | Very slight turbidity. No foam. Stage down. | |
| 07-10-85 | 01 | River clear & very low. | Partly cloudy, hot. High's 95-100°F. |
| 10 | 02 | River clear & low. | |
| 10 | 04 | River clear & low. | |
| 10 | 06 | River clear & very low. | |
| 10 | 07 | Effluent moderately turbid. Clarifier construction dewatering contributing 0.78 cfs to flow. | |
| 10 | 09 | River very clear & low. | |
| 10 | 10 | River very clear & low.Small patches of foam on river & a large accumulation near shore. | |
| 10 | 11 | River clear but w/noticeable algal particulate. Small patches of foam on river. | |
| 10 | 12 | No surface discharge. Sampled Pond 2. Effluent highly colored, almost black. | |
| 10 | 15 | River clear but w/noticeable algal particulate. Traces of lofty foam. | |
| 07-11-85 | 21 | River very low & clear. | Clear, hot, dry. |
| 11 | 23 | River high & moderately turbid. | |
| 11 | 25 | River very clear & low. Traces of foam. | |
| 11 | 27 | River low & clear. Traces of foam. | |
| 11 | 29 | River low & clear. Hit black bear on highway. | |
| 11 | 31 | River clear. No foam. | |

Appendix D. Condensed Field Notes - Part 1

Shallow-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 07-29-85 | 01 | River clear & low. | Partly cloudy, cool. |
| 29 | 02 | River very clear & low. | |
| 29 | 03 | Reservoir with a slight to moderate turbidity due to plankton or wave action. | Partly cloudy, warm. |
| 29 | 04 | River slightly turbid. | |
| 29 | 05 | River clear & low. | |
| 29 | 06 | River very slightly turbid. | |
| 29 | 07 | Effluent w/slight to mod. turbidity.Brownish cast.Quality fluctuating diurnall due to bulking problems & sludge pressing. About 1.55 cfs flow contributed by const.dewatering | |
| 29 | 08 | Slight turbid.in plume.Heavy periphyton growth. | |
| 29 | 09 | River low & very slightly turbid. | |
| 29 | 10 | River very clr & low.Foam accumulation present. | |
| 07-30-85 | 11 | River clear. | |
| 07-29-85 | 12 | No authorized surface discharge.Sampled leakage from discharge 002. Apparent high odor, color, solids content. | |
| 07-30-85 | 13 | River clear. | Clear, sunny, warm. |
| 30 | 14 | Nothing notable or unusual. | |
| 30 | 15 | Traces of foam. Heavy periphyton. | |
| 30 | 16 | River low & clear. Traces of foam. | |
| 30 | 17 | River low & clear. Heavy periphyton. | |
| 07-31-85 | 18 | River clear. Abundant Cladophora. | Cloudy, cool. |
| 31 | 19 | River low & clear. | |
| 31 | 20 | River clr. Foam traces.Cladophora sloughing | Cloudy, hot. |
| 31 | 21 | River clear. Abundant Cladophora. | |
| 08-01-85 | 22 | River clear. | |
| 07-31-85 | 23 | Very slight hint of turbidity. Stage normal. | |
| 08-01-85 | 24 | River clear & low. | Cool,cloudy,rainshwrs. Heavy rain last night |
| 01 | 25 | River clear. | |
| 01 | 26 | River clear. | Warming. |
| 01 | 27 | River clear. | |
| 01 | 28 | Reservoir clr but with visible plankton. | |
| 01 | 29 | River clear. | |
| 01 | 30 | Reservoir clear. Floating debris. | |
| 01 | 31 | Nothing notable or unusual. | |

Appendix D. Condensed Field Notes - Part 2

Deep-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 03-05-84 | 03 | Field notes lost | Cloudy,cool. 35° F. |
| 03-06-84 | 13 | " | Clear,sunny. 45° F. |
| 6 | 15 | " | |
| 6 | 16 | " | |
| 03-07-84 | 17 | " | Clear, sunny, warmer. |
| 7 | 18 | " | |
| 7 | 19.5 | " | |
| | 20 | This station not sampled spring 1984 | |
| | 20.5 | " | |
| | 21 | " | |
| | 21.5 | " | |
| | 22 | " | |
| 03-08-84 | 26 | Sampled near sawmill. | Clear, mild in a.m. |
| 8 | 28 | Sampled near N.Shore campground. | Cldy,windy,cool in p.m. |
| 8 | 30 | Sampled near Heron. | |
| | | | |
| 07-26-84 | 03 | Mostly sand in Ponar grabs. | Clear & hot. 90's°F. |
| 07-23-84 | 13 | Sand, gravel, rocks & traces of organic matter in Ponar grabs. | High 70's° F. Light overcast. |
| 23 | 15 | Mostly rocks and some black organic matter in Ponar grabs. | |
| 23 | 16 | Sand, silt, small rocks, some black organic matter in Ponar grabs. | |
| 07-24-84 | 17 | Gravel, rocks in Ponar grabs. | Clear & hot. 90's° F. |
| 24 | 18 | Sand, rocks in Ponar grabs. | |
| | 19.5 | This station not sampled summer 1984. | |
| 24 | 20 | No comment recorded. | |
| 24 | 20.5 | Very fine sand in Ponar grabs. | |
| 24 | 21 | No comments recorded. | |
| 24 | 21.5 | Sand, gravel in Ponar grabs. | |
| 24 | 22 | No comments recorded. | |
| 07-25-84 | 26 | Sampled below sawmill. Muck in Ponar grabs. | Clear & hot. 100+°F. |
| 25 | 28 | Sampled near N. Shore campground. No comments on Ponar contents. | |
| 25 | 30 | Sampled below Bull River confluence. No comments on Ponar contents. | |

Appendix D. Condensed Field Notes - Part 2

Deep-water Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 10-25-84 | 03 | Sand, organic material in Ponar grabs. | Cloudy, cool, rain showers. 30's$^{o}$ F. |
| | | River pool sampling discontinued. | |
| 10-26-84 | 26 | Sampled near boat dock. Ponar grabs contained nothing, rocks or fine silt. | Cloudy, cool, rain showers, 30's$^{o}$F. |
| 10-25-84 | 28 | Sampled near Town of Trout Creek & below N.Shore Campground. Muck in Ponars. | |
| 10-26-84 | 30 | Sampled below Bull River confluence. No comments on Ponar contents. | |
| 03-25-85 | 03 | Black organic material with slight $H_2S$ odor in Ponar grab samples. | Clear, sunny, cool. |
| | | River pool sampling discontinued. | |
| 03-25-85 | 26 | Sampled near boat dock. Light-colored sediments in Ponar grab samples. | |
| 03-26-85 | 28 | Sampled near Town of Trout Creek and out from N. Shore Campground. Light-colored sediments in Ponars. Water turbid from Noxon drawdown. | Clear, sunny, windy and cold. |
| 26 | 30 | Sampled near Heron. Light-colored sediments in Ponar grab samples. | |
| 07-29-85 | 03 | Mostly organic material with some sand and silt in Ponar grabs. | Partly cloudy, warm. |
| | | River pool sampling discontinued. | |
| 07-29-85 | 26 | Sampled below sawmill. Mostly organic material with some sand in Ponar grabs. | |
| 07-30-85 | 28 | Sampled near Town of Trout Creek and out from N. Shore Campground. Gravel, sand, silt, woody debris & fine detritus in Ponar grabs. | Clear, sunny, warm. |
| 30 | 30 | Sampled near Bull River confluence. Fine organic detritus in Ponar grabs. | |

Appendix D. Condensed Field Notes - Part 3

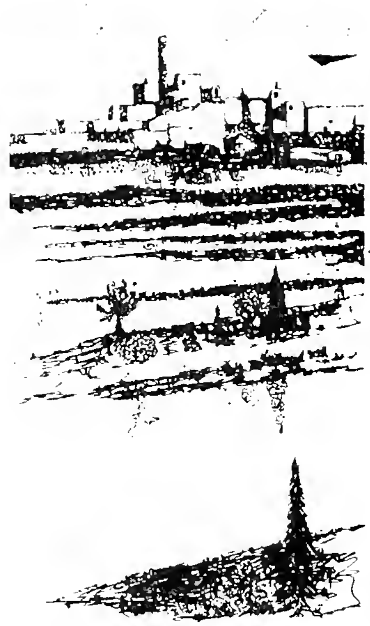
Diurnal Dissolved Oxygen Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 08-08-84<br>08-09-84 | 01 | Samples collected in a smooth run below a riffle along left bank. | Clear, sunny, warm at all stations throughout study period. |
| 08-08-84<br>08-09-84 | 06 | Samples collected in a smooth run along riprapped right bank. | |
| 08-08-84<br>08-09-84 | 09 | Samples collected in a run below a large eddy and along the right bank. | |
| 08-08-84<br>08-09-84 | 11 | Samples collected downstream of Harper's Bridge, right bank. | |
| 08-08-85<br>08-09-84 | 15 | Samples collected in a run along the riprapped right bank at Sixmile Station. | |
| | 16 | This station not monitored for diurnal dissolved oxygen & temperature in 1984. | |
| 08-08-84<br>08-09-84 | 17 | Samples collected in a run near the Petty Creek boat launch, left bank. | |
| 08-08-84<br>08-09-84 | 19 | Samples collected in a run just above the Lozeau Bridge, right bank. | |
| 08-08-84<br>08-09-84 | 20 | Samples collected in a run at boat launch above LaVista Bridge, right bank. | |
| 08-08-84<br>08-09-84 | 21 | Samples collected in a run just above the Tamarack Creek confluence, left bank. | |
| 08-08-84<br>08-09-84 | 22 | Samples collected in a run at the Hwy bridge just above Flathead R. confluence, right bank. | |
| 08-08-84<br>08-09-84 | 23 | Samples collected in a slow run at the boat launch several miles abv.the mouth, left bank. | |
| 08-08-84<br>08-09-84 | 24 | Samples collected in a run below the Plains Fairgrounds bridge, right bank. | |

Appendix D. Condensed Field Notes - Part 3

Diurnal Dissolved Oxygen Monitoring

| Date | Station Number | Observations and Remarks | Weather |
|---|---|---|---|
| 08-07-85<br>08-08-85 | 01 | Samples collected in same site as 1984 study. | Cloudy,cool,rain shwrs in morning 8-07-85. Clouds increasing in late afternoon. Cldy,windy,lightning storm with rain and/ or hail after dark. Cloudy, cool, rain showers morning of 8-08-85. Similar weather at all stations. |
| 08-07-85<br>08-08-85 | 06 | Samples collected in same site as 1984 study. | |
| 08-07-85<br>08-08-85 | 09 | Samples collected in same site as 1984 study. | |
| 08-07-85<br>08-08-85 | 11 | Samples collected in same site as 1984 study. | |
| 08-07-85<br>08-08-85 | 15 | Samples collected in same site as 1984 study. | |
| 08-07-85<br>08-08-85 | 16 | Samples collected in a run above Ninemile Creek confluence, right bank. | |
| 08-07-85<br>08-08-85 | 17 | Samples collected in same site as 1984 study. | |
| 08-07-85<br>08-08-85 | 19 | Samples collected in same site as 1984 study. | |
| 08-07-85<br>08-08-85 | 20 | Samples collected in a run just above the Superior bridge, left bank. | |
| | 21 | This station not monitored for diurnal dissolved oxygen & temperature in 1985. | |
| 08-07-85<br>08-08-85 | 22 | Samples collected in same site as 1984 study. | |
| 08-07-85<br>08-08-85 | 23 | Samples collected in similar location to 1984 study. | |
| 08-07-85<br>08-08-85 | 24 | Samples collected in similar location to 1984 study. | |



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